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# PHOTO-ERA

The American Journal of Photography

AN ILLUSTRATED MONTHLY

OF

PHOTOGRAPHY AND ALLIED ARTS

Volume XVII

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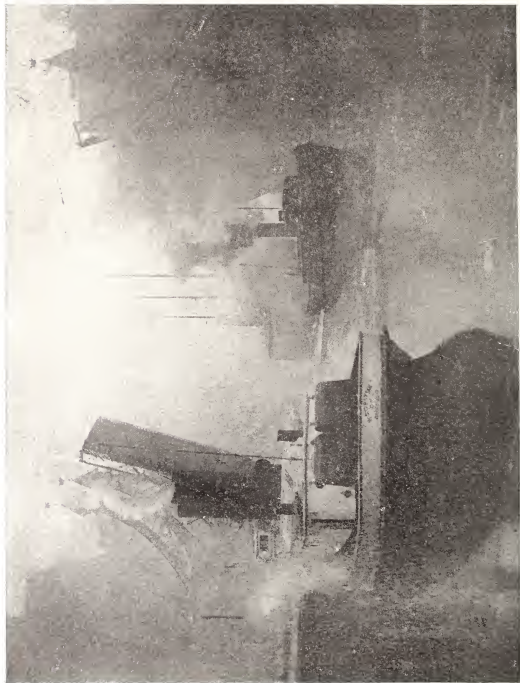
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W. H. PORTERFIELD

THE HIGHWAY TO THE SEA



# PHOTO - ERA

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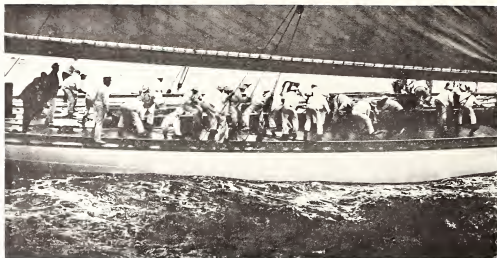
## YACHTING PHOTOGRAPHY

R. STROLLARD

**F**EW, if any, assignments are so enjoyed by the free lance and newspaper photographer as the "yachting assignment." It means a day on the water, plenty of fresh air, no walking hot streets and the work to be done of the pleasantest description. Not that it is all "pic" though. The work is as completely different from land photography as day is from night. The time of exposure is one of the chief differences. Extreme speed on the water will sometimes give an overexposed plate unless the lens is stopped down, and the really ideal weather is when the sky is a little overcast. Even cloudy weather is good for the work. But when the sun is shining a different procedure must be gone through than would be used if the work was done on land.

Instead of getting on the sunlit side of the boat to be photographed the best position is on the shadow side. The sunlight shining on the sails will give a negative in which the sky line and the sails will blend and give a flat negative, although the picture at the time will look very pretty to the eye. On the other hand the picture taken from the shadow side will be full of contrast, all the seams in the sail often showing, and the sails will stand out from the sky in the manner necessary to make a pleasing picture.

When the boat is running toward you more latitude can be used in regard to the light, and with the sun at your back many beautiful pictures can be obtained. One of the best pictures that I have of a yacht was taken at a preliminary trial of the "Shamrock III" with the sun at my back. The negative was stolen, but the accompanying picture of Sir Thomas Lipton's famous



R. STROLLARD

THE DECK OF A RACING YACHT

racing yacht does not show to good advantage the fine qualities of the original, because the cut used was made from a half-tone.

This picture was obtained under difficult circumstances. I was very sick with typhoid fever, although at the time I did not know it. The water was quite choppy, with a fair ground swell, and for the first time in my life I was seasick. Between attacks of mal-de-mer I managed to get the picture, and this was the last picture that I took for five months, spending the intervening time on my back in the hospital.

Another of my best pictures, the start of the "Reliance," "Columbia" and "Constitution," in one of the trial races, was taken from a rowboat. I had missed the press tug and had to take passage on one of the iron steamboats out to the starting point. On arriving there I found the press tug near by and the captain of the steamboat volunteered to put me on board of her. They lowered a boat and when we were halfway between the two boats the starting gun was fired. I stood up in the rocking boat and without stopping down the lens I fired away. The accompanying picture, also made from a half-tone, shows the result, and the only fault I could find with it was the fact that it was overtimed.

I have often been asked what is the best camera to use in yachting work. Anything in the hand camera line is good, but do not take a tripod along under any circumstances. Many good men do it, but how they ever get anything is a mystery to me. Two prominent yachting photographers use a long narrow box with the lens set at universal focus. As it is a rare thing to get closer than within one hundred feet of a yacht, they are excellent machines, with their bulk as the only drawback. A 5 x 7 reversable back reflex or graflex is the ideal camera. The yacht can always be followed and is in focus all the time, and if an accident occurs, you are "there with the goods."

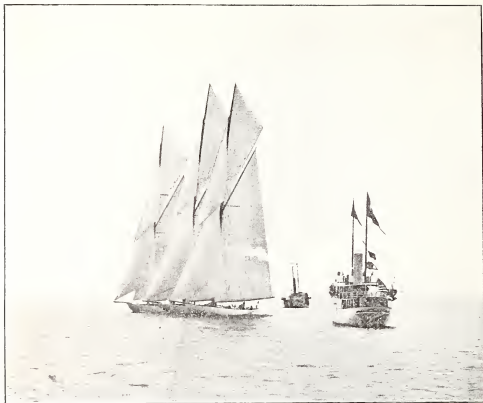


R. STROLLARD

"SHAMROCK III"

It is often essential, from a pictorial point, to get on the windward side of a boat. This is where you run into a flood of abuse and often profanity from the captain of the yacht. I always feel guilty when I have to do this, as getting to windward of the yacht is liable to empty its sails or "blanket" it, and such a proceeding is liable to spoil the chances of the yacht for winning the race. Most tugboat captains will not go to windward of a boat for any amount of persuasion.

Thinking to get a beat on the other papers, an enterprising photographer planted himself on the lower portion of the judges' boat and right beneath the starting gun. The boats came up beautifully aligned for the start and the photographer drew his slide and got a nice sharp focus, when off went the gun and there also was heard a faint smashing of glass. On examining his camera the man found that his ground glass was broken and also both plates in his



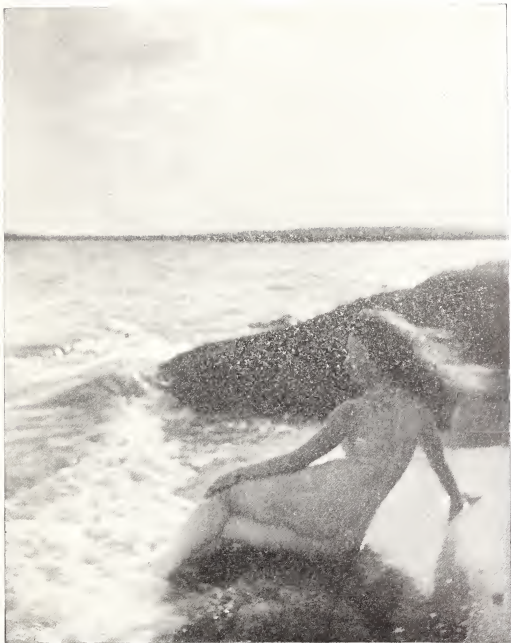
R. STROLLARD

START OF THE "CONSTITUTION," "COLUMBIA," AND "RELIANCE"

holder. But he learned something, anyway. It was the concussion of the firing gun that had played such havoc with him.

At the big races the photographer has to be content with small figures on his plate, as the government will only allow boats within a certain distance of the racing boats. Then comes the race to get the pictures into the office. Some of the big dailies use film cameras for this purpose and send in the film by carrier pigeon. This is an interesting process. The film used is about 1 x 1 and the exposed film is inserted in a small aluminum capsule which is tied to the leg of the pigeon. Many a "beat" is made in this way, and it is no uncommon thing to see actual pictures of the race on the street while the race is in progress. Of course there are times when the pigeon forgets to come home for a couple of days, but that is one of the chances.

Just a word of advice to any one going out to a race with a reflex or graflex camera. Do not keep your nose glued down to the camera all the time. If you do, it is pretty nearly certain that you will be seasick, no matter how good a sailor you are. The motion of the body, following the movement of the tug and the bobbing of the yachts, causes uneasy feelings in the region of the belt if kept up for too long.



DR. R. W. SHUFELD'T  
BATHED BY SUN AND SEA







T. EDWARD SCHIEDT

PARADISE CLIFFS, ROCKPORT

## THE PRINCIPLES OF PHOTOGRAPHY BRIEFLY STATED

PHIL M. RILEY

### SIXTEENTH PAPER — MARINE PHOTOGRAPHY

1. *The Need for Study.* — Sea, shore and sky — these three pictorial elements suggest a wealth of possibilities to the photographer of artistic temperament; possibilities which, although tantalizing in the difficulties they present to the novice, are quite captivating in their beauty and tend to materially increase the incentive for success. Furthermore, it may be said that with some familiarity concerning local conditions, careful observation, a little experience and much unremitting enthusiasm, marine photography will show much greater returns for the amount of work put into it than almost any other branch of the photographic art. Practically every one loves the ever changing sight and sound of the sea with its huge rolling breakers dashing unceasingly upon the jagged ledges, and the smooth sandy beaches of the coast line, while above all is the ethereal blue of the sky, patched here and there by fleecy clouds or overcast by the darker nimbus — forerunners of the Storm King. One never tires of the sea itself, whether in peaceful or angry mood, nor of its rock-bound coast, the shipping and varied harbor activities; but strangely enough one can-



ROBERT E. WEEKS

ICE COVERED BOATS

not find, even among the work of the best-known photographers, over a score of marine views which may in all honesty be said to be thoroughly convincing or to "wear well." This would seem to indicate that the average worker has not given the ocean and its allied interests, and more especially their photographic requirements, the study and careful observation they deserve, and it is with the hope of pointing out some of the possibilities and limitations of marine work that this article has been written.

2. *Surf and Wave Forms.* — Perhaps the most fascinating, and by far the most difficult, phase of marine work is the photographing of surf and waves. A tripod is practically out of the question and the common hand camera commends itself for all ordinary requirements, although one of the several "reflex" types of instrument, by means of which the subject may be watched and focused up to the moment of exposure, possesses distinct advantages for surf views, yacht races and the like.



H. W. SCHONEWOLF

THE COMING STORM

Whatever the camera used may be, however, the shutter is of great importance — of much more importance even than the lens. The open character of the views, the reflection from the water and the extremely actinic colors prevailing, all tend to permit and often necessitate stopping down to such an extent that the expensive anastigmat is useless. Rarely does this work demand better lens qualities than are possessed by a rapid rectilinear having a speed of *f.* 8. Diaphragmatic shutters should be avoided, because of their entire metal construction, which rusts upon a few days' exposure to damp salt air, rendering the speed markings totally unreliable and the shutter quite useless.

Curtain shutters are useful and the focal-plane type is particularly advantageous, since it admits nearly three times the amount of light with a given exposure that a before-the-lens curtain shutter does in an identical length of time. Thus it may be seen that a smaller stop can be used than with any other shutter, and that with it working at high speed, sufficient light for the proper timing of the plate can be secured, even on a dark day, with the ordinary rectilinear lens. This type of shutter also offers the distinct advantage of giving dark rocks or other objects in the foreground the fullest exposure possible with extreme rapidity. A focal plane shutter properly used is a fine thing, but the photographer who has one should keep one fact constantly in mind, which is that it is important not to give a greater speed tension than is necessary, else the surf, particularly spray in air, takes on an unnatural frozen appearance.



L. STOUFFS

THE FOOTBRIDGE

Just what the tension should be brings up the subject of exposure, concerning which something has already been said in the third paper of this series. The same conditions stated in that paper regarding the varying values of the light as affected by time of year, time of day and changes in the weather hold true in marine work as elsewhere, but as a basis for calculation it may be said that through the summer months 1-100 second with stop f. 16 will be sufficient exposure for surf views during the middle of the day. Extreme shutter speeds destroy all naturalness in the picture, and exposures ranging from 1-50 to 1-150 second seem to cover all the requirements.

The camera for this work should preferably be not larger than 5 x 7, to avoid being cumbersome, while the lens will be more satisfactory if of somewhat longer focal length than is ordinarily used and fitted with a reliable focusing scale and an easy method of adjustment. A 5 x 7 lens of 10 inches focus gives truer perspective and larger images of distant objects than a lens of short focus. Provision should be made to protect the lens from spray by a cap which can be removed just previous to exposure and immediately replaced. If the camera is fitted with a diaphragm shutter, it will be a wise precaution to have a small bag of oiled silk to protect both lens and shutter when not in actual use.

Either plates or films of medium rapidity may be used, although the chief advantage of films is for convenience in making exposures in rapid succession, as in views of yachting and the varied harbor activities. Plates should be

double coated or backed with non-halation compound. Color sensitive plates and screens are not often a distinct advantage, owing to the marked contrast in the prevailing colors, but if used, the screen should not be too dark, as overcorrection will result.

With these suggestions it remains only for the worker to select a good viewpoint, either on the beach or rocks, where the big rollers come tumbling in, and by careful observation and study of the different stages of wave formation, to secure a series of characteristic views. If space permitted, much might be said of wave formation, of the different stages at which pleasing pictures can be made, of the vast difference between views made with the light and against it and the effect of wind upon surf; all these, however, must be left for the investigation of the photographer, who will find them all as instructive as they are fascinating.

3. *Vessels at Sea.* — Another very interesting phase of marine work is the photographing of boat races, regattas, yachts and vessels at sea. Such views must usually be made from another boat, and a hand camera is therefore indicated as being the necessary equipment. In fact, the "reflex" type of camera just discussed commends itself most strongly, although there are times when even an ordinary folding instrument and tripod may be used to good purpose. Too much, however, cannot be said of the distinct advantage of being able to watch and focus an upright image of the subject up to the moment of exposure, as is possible with a "reflex" camera. When some distance from an approaching vessel its increase in size in the finder seems very slow, but as the intervening distance becomes less, the vessel suddenly seems to fill the entire picture. Such work as this demands vigilance and composure on the part of the operator, and it is only with a "reflex" camera that satisfactory results are certain.

Regarding the position of a vessel in relation to the camera, it may be said that, although there are exceptions to all rules, broadside, bow and stern views are not as a general rule pleasing. Good lines and perspective may be secured when a vessel is approaching at such a distance that it appears to be from two thirds to three quarters of its actual length. Views of receding vessels are rarely so pleasing, especially in the case of steamships; several pictures are extant, however, to prove that even stern views of sailing craft with their canvas spread against the dying rays of the setting sun when obscured by low-lying clouds are very effective.

This brings up the matter of lighting, a thing which is often beyond the control of the worker, who must take things as he finds them. If working from a small boat, however, it is usually possible to find a point of vantage from which a pleasing result may be secured. When fortune favors and a choice is possible, marines should be attempted early and late in the day, when the light is lower and less intense. This gives more contrast between the sails and the blue sky, which under the glaring rays of the noonday sun tend to merge almost into one in their chemical effect on the plate. In fact, to secure proper contrast





W. A. I. HENSLEY

SECOND AMERICAN SALON

A STORMY SUNSET



SAMUEL HOLDEN

A GLOUCESTER DOCK

and sufficient roundness to give perspective and naturalness is the chief difficulty to be overcome, and it is with these aims in mind that the best lighting must be determined. Probably the most extreme contrast is secured when the light is behind the sails, which would then appear dark against a light sky; with the light shining from behind the operator the values would be reversed. It can be seen, therefore, that the question becomes largely a matter of personal feeling, depending upon the idea to be conveyed. As a suggestion for experiment, it will often be found that when both the light and shadow side of the sails are partly seen at the same time, a pleasing amount of contrast will be secured. This result may frequently be obtained when the sun is somewhat to the right or left of the worker, rather than directly behind him.

Composition, that is to say the position of the vessel in the picture, is important, and if not readily under control at the time of exposure, can be varied to some degree by judicious trimming of the print, enlarging or both. While the generally accepted principles of composition hold in this class of work, yet the position of the principal object can often be varied to simulate the idea of motion which is so often lacking in photographs. If the vessel has just entered the print and has a considerable visible distance yet to travel, the im-



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AFTER A STORM

pression of slowness of movement is apparent; but if, instead, it is approaching the opposite edge of the picture, the impression conveyed is that of speed; while, on the other hand, a dead calm is brought more forcibly to the attention if the vessel, with its lifeless, empty sails, occupies a position somewhat near the center.

Whenever the sentiment of rapidity of motion is desired, avoid shorter exposures than are absolutely necessary, as they tend to make any moving object appear stationary. Even though there be ever so little blur, there is life and action — the picture is convincing. Another important point is the horizon line. If the horizon is high the effect is that of nearness, while a low horizon gives the effect of distance; the former class, in which the picture must of necessity be made up largely of ripples and reflections, is productive of effective compositions, although much neglected by photographers. An exposure suggestion has already been made under the second heading of this article, and it may be added that in general it is difficult to underexpose. This being true, the marine worker would seem to have everything in his favor, since overexposure is far preferable to underexposure, and by proper development, as indicated in the fourth paper of this series, or by intensification, a satisfactory negative may be obtained. The exposure necessary for moving objects has already been treated in the tenth paper of the series on "Street Views," and a comparison of that paper with the third on "Exposure" should be helpful.



W. H. PHILLIPS

MARINE STUDY

4. *Coastwise Scenes, Shipping at the Docks.* — Both of these subjects offer excellent opportunities for pictorial treatment, but with what has already been stated in the ninth paper of this series on "Landscape Photography," supplemented by the present article, little more need be said. As suggested in the paper on "Exposure," seashore views require about one-half the exposure of an average landscape under the same conditions, while shipping about the docks should usually receive about double this exposure.

5. *Development.* — Development is important because the conditions under which marine views are made tend to give flat negatives. For this reason hard-working developers which give contrast are preferable, and a normal pyro formula is satisfactory in every respect.



W. H. PORTERFIELD

A CORNER ON THE DOCKS

## TAKING OBJECTS SO AS NOT TO SHOW MOVEMENT

DAVID GRAY ARCHIBALD

**I**F you are inclined to the photographing of very rapidly moving objects and want to take them so that they do not show the slightest motion, you must work in accordance with the laws governing this kind of work. You should plan to take them when they are moving at their slowest speed. The main point in the photographing is sticking to the one maximum exposure that you have found will "stop them" (*i.e.*, give you plates without visible blurring of the image of the object taken).

Vary your stop as need be, according to the light conditions, but let your shutter speed remain where you have placed it. In this way you will get a picture each time without a blurred image and with the best possible definition under the conditions in which you are working. If the subject cannot be taken with the lens "full open," then you may as well give up any further attempt to secure it.

The size of plate which you work with has a bearing on your results. Short focus lenses and small plates make for depth of focus with large openings. The angle at which you take an object and the distance you are away from it have an important bearing on the subject. It is easier to get objects when coming towards you or going away from you than when you take them at right angles. After you once secure a plate you can enlarge the image to suit.



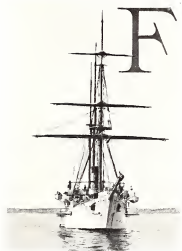
WALDON FAWCETT  
U. S. BATTLESHIP "ALABAMA"



# UNITED STATES NAVAL PHOTOGRAPHY

WALDON FAWCETT

(The photographs accompanying this article are copyrighted by the author)



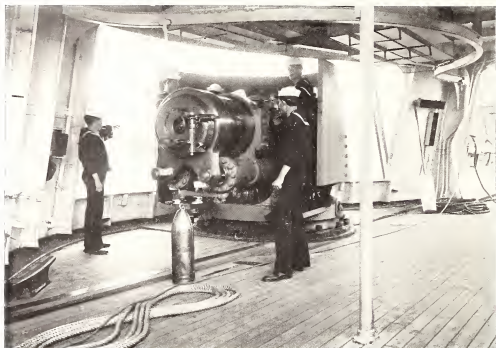
FOR amateur and professional alike there is perhaps no more fascinating branch of photography than the portrayal of the majestic beauty of Uncle Sam's naval vessels and the always interesting life on board these floating fortresses. Manifestly, however, the attractions of this section of the pictorial field and the artistic rewards awaiting the explorer are but inadequately appreciated, for even in this age of specialization we find a comparatively small coterie of workers devoting themselves to this class of maritime subjects.

Possibly an explanation for the neglect is found in the belief which appears to be general among photographers that really desirable naval negatives can be obtained only by a liberal ex-

penditure of both time and money. This verdict should not be accepted without reservations. To be sure, there is, in the eyes of the enthusiast, nothing quite so inspiring as a graphic representation of a graceful warship in the open sea leaving behind long trails of foam as she pokes her sharp nose into the white-caps, but this does not mean that very excellent and satisfying pictures have not been obtained in land-locked harbors by persons who had not the opportunity to catch the ironclads in their element.

Another deterrent influence is found in the common belief that opportunities for naval photography are denied by force of circumstances to all camera devotees save those fortunate enough to reside in a few of the more important ports of the country. This is, to say the least, an exaggeration. There is scarcely a harbor of any size on either the Atlantic or Pacific seaboard or the Gulf of Mexico that is not visited at least once each year by one or more American naval vessels, and very frequently these visits are of sufficient duration to enable a photographer to obtain a collection of plates depicting every phase of life on board the ships.

Or better yet, why should not the photographer in search of the picturesque devote his annual vacation, be it brief or protracted, to a quest for naval subjects. The sea warriors flying the Stars and Stripes usually travel in squadrons, and it is seldom difficult to locate a fleet even at short notice, for the defenders of the flag as they patrol up and down our coasts follow the same general program, year in, year out — migrating northward and southward in season very much after the fashion of the birds. For instance, the photographer who finds



WALDON FAWCETT

TRAINING ONE OF THE BIG GUNS

leisure in the winter to make a pilgrimage to the naval shrine may expect to find the ships of the line at Pensacola, Florida, or in West Indian or Southern California waters. Similarly in the spring or the autumn the best rendezvous is Old Point Comfort, Virginia, whereas in summer the goal had best be any one of a dozen leading watering places on the New England coast or the ports of the North Pacific Coast.

To obtain a pleasing negative of the exterior of a naval vessel appears, at first thought, so simple an undertaking that perhaps a word of warning should be said regarding hidden obstacles lest the new convert to this branch of photography be discouraged at the outset. It would be difficult to find anything more admirable than a technically perfect photograph of a naval vessel, her graceful lines traced against the sky or a neutral background; but on the other hand, perhaps there is nothing more disappointing than a view of the same ship lying broadside against an unsightly dock with a vista of dilapidated sheds and other eyesores in the background.

Here, then, is found the most perplexing problem that confronts the naval photographer—securing surroundings that will not detract from the artistic qualities of his principal subject. The problem is complicated by the fact that the size of the average war vessel compels even the possessor of a wide-angle lens to place his camera at a considerable distance, while all the tricks



of the trade in the matter of "blocking out" work are ineffectual when it comes to tracing out the almost innumerable delicate lines which make up the rigging of a ship. Another irritant which tries the patience of the naval photographer is the conspicuous presence of the ships' wash which never fails to put in an appearance when the vessel is in port. Naturally, the long lines extending from the mast to the deck and heavily laden with freshly laundered articles of sailor attire do not add to the *ensemble* effect of a picture, and yet eternal vigilance on the part of a photographer is likely to be the price of an opportunity to catch the ship in apple-pie order.

While on the subject of exterior views of naval vessels, it may be noted that nothing save "snap-shots" are, of course, practicable from rowboats or launches, whereas a tug which can travel abreast a moving warship at the identical speed maintained by the larger vessel is an expensive luxury, costing from five dollars upward for even the shortest trip. The problem of background above mentioned and the desire to show warships in marine settings, untrammelled, leads many a naval photographer to depend upon catching his subject by an instantaneous exposure from some such vantage point as a sea wall or a drawbridge when the vessel is entering or leaving port. From such standpoints there may be obtained bow or stern views which are a revelation to the photographer who has contented himself with broadside views.



WALDON FAWCETT

SIGNALING ON THE BRIDGE

Whatever may have been the discouragements of the photographer in securing exterior views of a man-of-war, he is likely to find clear sailing once he steps aboard ship. To be sure, some of the interesting nooks below decks, such as the engine rooms, the galley and mayhap even the gun deck will baffle the man who is not provided with flash powder, but there are sufficient subjects available under ideal conditions to exhaust all the plates a man can carry.

As a rule, the picture taker will find that no objection is made to his operations, but on the other hand he is welcomed with that fine, generous hospitality which is one of the distinguishing traits of the Yankee naval officer. This observation is interposed to puncture the fallacy that photographic work on our war vessels is a thorny path. There are, it is true, intervals each day when drills are in progress and when no stranger is welcome on board, but during the hours when a warship is open to visitors the photographer may expect to receive *carte blanche*, in the cheery words of the officer of the deck, to "Go ahead and take anything you want." Nothing is barred from the inquisitive camerist, not even the big guns or the signal apparatus, and the freedom with which he is allowed to point his camera whither he will is assuredly in marked contrast to the conditions at the average American military post, where anything bearing the semblance of a camera suffices to plunge the men on duty into a fever of anxiety, as though visions of foreign spies were ever haunting them.

There are several points in connection with photography on naval vessels which should be borne in mind by the operator who does not wish to pay the price of experience for his knowledge. One of these is to make due allowance in making exposures for the white paint and the light-colored woodwork which predominate everywhere on shipboard. Another is to maintain constant watchfulness as to the effect of the shadows of the ropes and railings which are omnipresent on a man-of-war, often to the detriment of an otherwise satisfactory picture.

Without underestimating any of the other pleasures of picture making on an American warship, it must be confessed that the crowning delight of this photographic paradise is the bluejacket. Jack dearly loves to have his picture taken, and in ability to hold a pose I have never seen his equal, unless it be, possibly, the American Indian. Moreover, he is good-natured and obliging, and will cheerfully go through gun drills and other evolutions that illustrate work and play on a floating fortress, even though he makes considerable extra work for himself thereby. However, your naval tar is a stickler for correct detail. Perhaps a flag may not be waving to the best advantage, or again it may be an oar that is out of place on deck, but whatever the omission, rest assured the watchful Jacky, trained in routine, will espy it and call a halt on proceedings until matters are set right.

For the photographer who rejoices in having his work illuminated by side-lights on character and flashes of human interest the naval work is full of opportunity. Just to illustrate, I will digress to tell of a pathetic letter which I re-



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U. S. S. "VIRGINIA" AT FULL SPEED



WALDON FAWCETT

U. S. BATTLESHIP "INDIANA"

ceived a few months since from an old lady residing on a farm in Indiana. Years ago her only son ran away from home and she had never been able to get the slightest trace of him until she saw his picture in one of my photographs showing a party of bluejackets celebrating Christmas on shipboard. She wrote to ask when and on what ship the picture had been made, and with this slight clue the Navy officials were enabled to locate the young man and bring happiness to a widow's home.

The photographer who goes aboard a naval vessel and gets into the good graces of the sailors can rest assured that he will be importuned to make pictures of the ship's mascot. This pet — the common property of anywhere from one hundred to five hundred lively young Americans — may be a dog, a cat, a parrot, a goat, a monkey, a donkey or even a bear, but whatever his identity, it is certain that he holds a large place in the affections of his masters. Almost invariably he is proficient in tricks, and even such unpromising pupils as roosters, pigs and cats have been taught by the patient tars to perform the most remarkable antics. Of course, it is Jack's dearest ambition to have the accomplishments of the mascot photographically recorded, but it is a foregone conclusion that nothing slower than a focal plane shutter can ensure this.



WILLIAM CLAYDEN

SECOND AMERICAN SALON

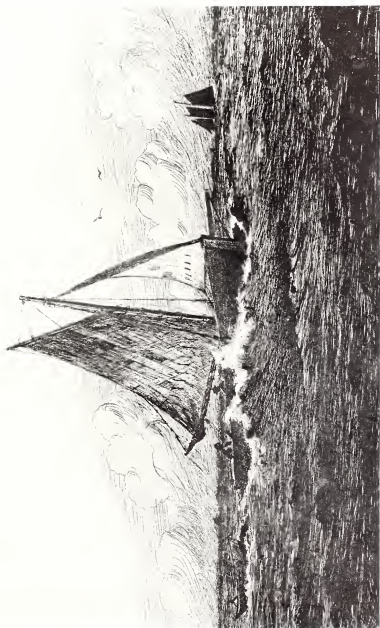
TUGGING HOME

## PHOTOGRAPHY AND ETCHING

W. JAY LITTLE

WHISTLER became famous as an etcher many years before he was recognized as a painter, and even to-day, after being placed among the truly great artists, we hear more about the etchings and the high prices they bring at auction whenever they appear. What a pleasure it is to study a collection of Whistler prints. One can feel that the artist had such a control over the little needle as it scratched the black wax ground and allowed the bright copper to shine through. The exquisite delight of being able to make the most delicate lines, and then, when necessary, to scrape broad and clean so that the plate will print as black as the ink can make it. It is so interesting to study the individuality and expression of famous etchers; one could never mistake a Rembrandt or a Jacques. There is something about an etching needle when used on a soft wax ground that allows of a freedom which cannot be found with any other medium or material, be it paint with brushes, lead on paper or ink with pens. There is always a limit to the material and one must stop to sharpen a pencil or the ink does not dry fast enough to allow for crossing of lines, while the little needle goes on with the work, obeying the will of the artist, going down, across and up, with equal facility until the sketch is complete. How many times we have heard the wish expressed to be able to make a free-hand sketch without any limitations or preparations of camera or chemicals, and the dreary waiting, but to be able to make off-hand a sketch that would look enough like a place so that it would be recognizable to our friends to whom we might wish to send it.

Ah! But we know that to do this would require years of study, and life is so short we cannot do everything, and we have made our choice in another direction, which requires all of our energies. But the moment will come at times when we will say, "I would give anything in the world to be able to do that;" but we must be satisfied with the little snapshot for want of something better. It is strange how we cherish a little sketch by an artist, just a few lines not half as valuable as a photograph for identification purposes, but it somehow gets a frame and is valued because it is an exhibition not only of artistic expression but as an acknowledgment of being favored in some way by the gift, while a photograph seems to be one of many. We go to the Symphony, and then after coming home we carefully look over our *répertoire* and choose something into which we feel that we can infuse our individuality or soul as it is understood; but, alas! for the thousandth time we find we are unable, for want of technical ability, to express our feelings, and so we are discouraged, it is all so hopeless. We know it must mean years and years of labor; the hand and mind must be trained, and so we despair and give up all together in disgust; our taste and critical development being far in advance of our ability to produce for mere lack of time to practice. But this is a wonderful age, and the inventor has furnished us with the piano player attachment, a substitute by which we are made happy.



ETCHOGRAPH BY J. B. FOSTER

THE RETURN OF THE FISHERMEN



N. L. STEBBINS

AN AUTO BOAT RACE

By placing a roll of music in this wonderful instrument we can have the great works of the most famous composers, all being played mechanically, but satisfactorily, our part being reduced to the pumping and management of stops by which we vary the expression to suit our mood.

Etchograph plates are to the amateur artist of photography what a piano player is to the music-loving soul,—a short-cut to the exquisite pleasure of being able to express oneself without years of hard study, a pleasure now within the reach of any one. Yesterday it was impossible even to think of making an etching. You have been told of the difficulty of drawing a reversed subject free-hand. The expensive copper plates, the ground to be blackened over a smoky lamp, then the strong nitric acid, with its deadly fumes, the stopping out and adding of more lines, then the bath again, perhaps doing this a dozen times until the plate was etched correctly, taking perhaps a week before it looked satisfactory or of sufficient value to go to the expense of having a printer strike off some proofs; or perhaps you decide to buy a cheap etching press just as an experiment, and find you cannot get sufficient power to bring out the fine lines of your plate, so you go to the expense of all kinds of inks, and at last you are induced to invest in an iron press weighing hundreds of pounds. It takes up most of the room and costs hundreds of dollars, only to be sold for junk in a year or two. If any amateur thinks photography expensive, he should try the art of etching. But this was yesterday: to-day we find an etching plate already prepared with the finest ground, made of materials that the old masters never dreamed of, so soft to the touch that one might close one's eyes and outline a subject with a needle, whose own weight could cut through the ground and make a line as fine as a spider's web. Or, if you have a disposition to make





W. H. PHILLIPS  
ALONG THE BOSPHORUS





H. W. SCHONEWOLF

THE JOY OF THE SURF

a strong black effect, which can be seen the whole length of the room, then you use the side of your needle and scrape off the ground in large broad lines, still retaining as a reserve your pen-knife to make a clear, fine, black line. The ground is so tenacious that you can etch over and over the darkest places and there will still remain a tone until you find they need an accent, so you deliberately clean off the ground in places to gain your end. Your whites or high lights take care of themselves, as the etchograph ground is nonactinic, but transparent, and covering a transparent base of material like thin gelatine or celluloid. And here is the great advantage to photographers, because this plate can be placed over your best print or even negative and an etching made by tracing the subject by seeing it through the transparent nonactinic etchograph plate; and it is made nonactinic so that you can place your paper on the plate and expose to sun or artificial light and get an etching by the light passing through the clean lines which you have scratched on your plate, simply using any photographic paper, — brown, black, gray or even blue-print, though there is a brown-print paper now being made which is as inexpensive as blue-print and is simple to manipulate, so that with these plates a dark room is unnecessary.

Perhaps you are clever in sketching; then you will not need to trace your picture, except perhaps for the outline, but will allow yourself full sway, and find it a pleasure to have power over the little needle, which is as obedient to your will as a pen filled with ink sliding over a sheet of smooth paper, adding or subtracting from the photograph or sketch from which you are copying,



W. A. I. HENSLEY  
TOWING THE BARGE  
SECOND AMERICAN SALON

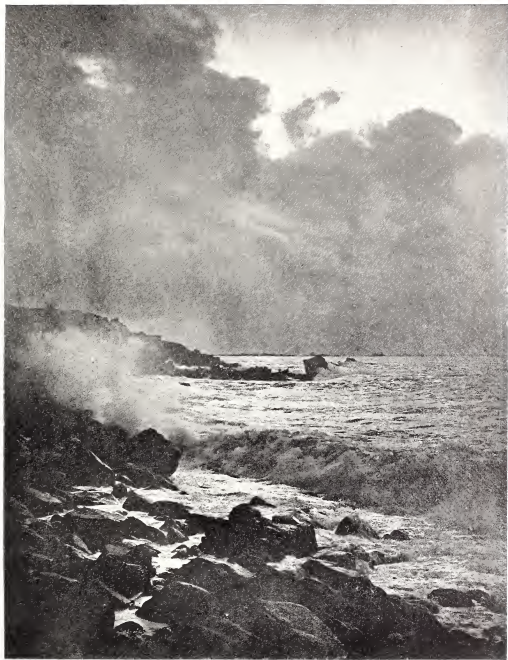




ROBERT E. WEEKS

MOONLIGHT ON THE MISSISSIPPI

emphasizing, reducing or intensifying as you choose. And so in this twentieth century we can, for a few cents, purchase a plate all prepared on which an etching can be made and prints taken from it, all within the short space of half an hour, though one could work half a day to advantage by adding new lines and stopping out with opaque color all lines not wanted, and all this without an etching press or without a camera, unless one wished to place the plate in front of the ground glass and focus the subject on the plate and then etch it. Very interesting outlines or silhouettes of one's friends can be made this way very quickly. This work a child can do without a lesson in drawing, simply using care in tracing the outline and care in scraping off the ground when a pure black silhouette is wanted. Possibilities of this etchograph plate multiply as one thinks of this idea of the nonactinic surface on a transparent base. The Number Three plate, for instance, is so thin and has such a beautiful fine stipple, that the plate can simply be put over any negative and print together and you will get the effect of a beautiful gum picture, or you can use it in intensifying places in the background by simply scraping off a tree or a little landscape, or the plate can be used for portraits by etching a tapestry or furniture effect. The ground over the head can be scraped off completely and the plate will hold back the background with a beautiful stipple tone. If you wish an accent, simply make a few scratches and the little difference between the clear plate where scratched and the etchograph ground, which remains, will tell wonderfully on your print.



C. J. KING  
THE APPROACHING STORM  
SECOND AMERICAN SALON





ROBERT W. TEBBS

ANCIENT VS. MODERN

## LAYING OUT THE COURSE FOR AN ECONOMY RUN

ROBERT W. TEBBS

**I**T was a merry party that started out from New York to go to Albany to lay out the course for an economy run from that town to Springfield, and it was just as merry a crowd that returned a few days later.

After reading Mr. C. H. Claudy's article in the March number of the PHOTO-ERA, on automobiling with a camera, it did not require much persuasion to get me to accept an invitation from the White Sewing Machine Co., makers of the White steam car, to become one of the party on the trip. I was told to bring my camera along. "There will be five of us in the car," said Mr. U——, our host, and I saw at once that a big outfit would not be welcomed, but would be considered a nuisance; besides, it is not necessary in this day of modern outfits. So I got out my 5 x 7 Auto Graflex, with its small Cooke lens, and sticking a half dozen film packs in my various pockets, was all ready to start; no tripod to get twined up in people's legs, no plates to break, and no littering the floor of the car with a lot of junk. Out of the six dozen pictures made I do not think the car was delayed five, nay, not even three minutes, for any one of the photographs taken.

But to return to the trip. Have you ever traveled in one of those "steamer" cars? If you have not tried one, do so now. There is no noise or vibration, and the "big smell" is absent also.



ROBERT W. TEBBS

THE INDIAN MONUMENT, STOCKERIDGE

The trip to Albany was uneventful, and it was not until we left there that the real interest of the run commenced. Naturally it had to rain, and the condition of the roads after that — well, if it had not been for the State road which consoled us with its smoothness for about forty miles, I verily believe that I should have gotten out and walked back home.

But a Frenchman who was with us kept us in good spirits notwithstanding the torture. He would go into raptures over the scenery, and in the middle of an exclamation of ecstasy that no one but himself could understand, the rear wheels would sink up to the hubs in the nameless mud and we would all have to get out and shove. And while the Frenchman got out and pushed like the rest of us, he never let up on his exclamations of delight about the beauty of the hills. Very likely they were beautiful, but we, with our eyes filled with mud, and our clothes bespattered with it, could not see things just his way.

Leaving Albany at 7.30 in the morning we went directly through to East Greenbush. The roads were in an awful condition. Ten miles from Albany we passed the huge town of Schodack Center, which consists of a deserted blacksmith shop and nothing else, and continued on to North Chatham.



ROBERT W. TEBBS

A LONELY SPOT OUTSIDE ALBANY

The next stop was at Valatie. Leaving there we climbed a hill which none other than a White car will ever climb, unless the occupants climb out and carry the machine up to the top. Then we had fairly clear sailing till we reached the town of Chatham. At the end of the town we passed the big Windsor Hotel. Here we turned to the right, passed the railroad tracks a couple of hundred feet farther on, and then, turning to the left, the road took us directly to the State line, where we found the monument dividing New York from Massachusetts. We took lunch at the State Line Hotel and the milk in that place was alone worth the price of the whole lunch.

This is where the beautiful scenery really commences. At least, this is where we first began to notice it. The rain had stopped and we were able to clear our eyes of the roadway we had been following. Parallel to the road we were running on, and sloping down to it, was a high rocky ridge strewn with little clusters of pine and birch trees. On the other side was a rather flat country relieved by a series of small lakes. Nature had on its spring array, and right there I was willing to get off and use up every film that I had left. Who wants the city life, with its roar and bustle and fetid air, when the country in its springtime glory holds out its welcoming arms to us?



But let us come back to earth. A double turn, that will take some unwary drivers by surprise and turn their hair gray, a railroad bridge, and we were in Great Barrington. Here was an ideal town. We stopped in front of the garage on a wide asphalted avenue, and took on gasoline and water.

"My, how good a glass of beer would taste!" I remarked to our host. "Yes, indeed," he replied; "but," with a mournful shake of his head, "this is a dry town, you know." I had about resigned myself to the inevitable when Mr. U—— touched me on the arm and said, "Come into the drug store for a minute, I want to introduce you to a friend of mine." Somewhat puzzled I followed him into the store. Mr. U—— took the old gray-haired pharmacist into a corner and held a low-toned conversation with him, and they kept looking in my direction till I commenced to grow uneasy. All I could catch of the talk were the words "dizzy" and "nausea."

Finally the druggist shrugged his shoulders and brought out a prescription blank which Mr. U—— signed and a few minutes later we were in possession of a half-pint flask of the good old "Scotch." Such is diplomacy.

Leaving Great Barrington we passed through more beautiful scenery, and crossing the Housatonic River entered Glendale. From there a wide avenue leads us to Stockbridge. Here we ran into the most beautiful spot of the whole trip. It was growing dusk, but slowly, as we were at a high altitude. On our right the glimmering landscape faded away into the distance, but near us was a green lawn covered with lofty cedars and pines. There were no villages, just artistic cottages here and there, each set like a little jewel in its individual park.

We made our quarters that night in the Red Lion Inn, and the big airy bed was never more welcome. I counted seventeen black and blue spots on my anatomy from hitting "thank-you-marms" on the road, but the counting of these put me to sleep in short order.

Friday morning broke clear and sunny. Leaving Stockbridge we passed the Indian monument on our left and of course we had to stop and make a picture of that. Continuing to our right we passed the Hotel Aspinwall. The seven miles between Lenox and Pittsfield passed all too quickly. Here the road runs on a mountain flank and the vision of the Berkshires, at our feet, seen through the blue morning haze, with a silvery stream, several beautiful lakes and the artistic bungalow of some millionaire in the foreground made a picture that a painter would have gone into raptures over. Looking through the ground glass of my camera I uttered a prayer that the day may soon come when we shall be able to reproduce the colors as we see them there.

From Pittsfield we went back on the same road to Lenox. At the Hotel Curtis we turned to the left and proceeded on our way to Lee. The scenery continued as beautiful as ever, and the roads were perfect. We ran along the shore of a beautiful lake and immediately after climbed a hill that brought us to a spot where nature ran wild. We found ourselves on the top of a high mountain and all around us lay valleys in different shades of green with little



ROBERT W. FEBBS

OUR FRENCH FRIEND STUDYING NATURE

villages scattered all about. Here starts the little Westfield River. Away off in the distance two tall mountain peaks stand like sentinels keeping watch over the universe. Even the machinist was impressed by the grandeur of the scene, but the greatest tribute to the magnificent picture was that the Frenchman could not find a word to say. He laid his hand on the arm of the chauffeur, asking him to stop, and with one deep sigh of content just sat gazing till we started off again.

Down the hill we shot over a narrow and rutty road to West Becket, and after passing the post-office started climbing another hill. At the top of this one we passed an old wooden building blown down by the wind, then we plunged down a deep slope where we found the Westfield River already grown to a larger size.

Chester was but a few miles farther on. From there to Springfield we had fair roads, and I was heartily sorry to see the end of the trip drawing near.

With Mr. Claudy I can say to you, my photographic friends, that it is worth a month's rest by the seaside to get into one of these "steam devils" and have the cobwebs blown out of your brains. With the air rushing past your face and the sweet uncertainty of life and death that the right chauffeur can instil, you will say as I do of this particular trip, that it will last long in my memory as one of the pleasantest experiences that I have ever had, and I can heartily add "Thank you" to the makers of the White car for the privileges that they extended to me.



WILFRED A. FRENCH

LAKE MAGGIORE—ISOLA SUPERIORE

## A PHOTO-ERA TOUR IN EUROPE

*(Continued)*

## THE ITALIAN LAKES, MILAN AND VENICE

WILFRED A. FRENCH, PH.D.

**D**URING the summer months the region of the Italian lakes is alive with tourists and accommodations of any kind are not only difficult to obtain but are charged for at exorbitant rates. It was fortunate, therefore, that the regular season for the American tourist — for whom the hotel proprietors generously reserve their “charging” propensities — was over, and we thus made the best of this golden opportunity. We secured *pension* rates, although our stay in none of the lake towns exceeded three days. The weather was glorious and the air slightly cool and invigorating. Verily, I much preferred these few days of the first week of November to a week in a previous July, when the oppressive summer heat was not conducive to enjoyment. Therefore I better appreciated the enchanting beauty of those famous little islands, Isola Bella, Isola Superiore and Isola Madre. The clear November air yielded most satisfactory photographs of this picturesque region. The historical and richly-furnished castle of Borromeo on the first-named island interested us all. While roaming through the apartments rejoicing in reminiscences of many distinguished personages, the mind was strangely fascinated by the memory of that young military genius, whose brilliant and daring exploits electrified the world — Napoleon Bonaparte. The music-room, much admired by him during his sojourn here, drew our photo-



WILFRED A. FRENCH  
MUSIC ROOM, CASTLE BORROMEO, ISOLA BELLA  
WASHERWOMEN AT PALLANZA



graphic fire with favorable results. While enjoying the scene on a moonlit evening from the shores of Pallanza, we were startled by the notes of a vocal artist which were wafted to us across the lake, seemingly from Stresa. The air was still, all nature seemed asleep. Not a ripple disturbed the mirror-like surface on the water. We listened for several hours, spell-bound by the beauty of the clear, distant notes of the human nightingale. Inquiry the next day yielded the information that we had been favored by no less a singer than Melba, who was a guest at the Harris Villa at Stresa.

Although pressed for time we ignored the short cut to Milan—via Laveno and Varese—preferring the more northerly route, via Lakes Lugano and Como. It is a two-hour ride from Pallanza to Luino. From the latter place where that wonderful draughtsman and colorist, Luini, was born, the narrow-gauge railway takes us through the charming little valley of the Tresa, to Ponte Tresa, on the western bay of Lake Lugano. The continuation of the journey by boat along the shores of this fascinating sheet of water, was an experience of pure delight. The eye was held captive by an unbroken series of pictures, among which the prettily terraced town of Morcote with its lofty church and ruined castle stood conspicuously. The southern portion of the town of Lugano is named "Paradiso," and fittingly so, for a lovelier spot it were difficult to imagine on God's foot-stool. A view from any of the surrounding heights, combining the town and lake and relieved against the sombre mountains, affords a picture truly inspiring. It is all Swiss territory, but typically Italian and charmingly quaint. The prospect from Monte San Salvatore, reached by a cable railway of bold construction, is singularly fine, although not so extensive as from Pilatus or the Rigi. The finest scenery on Lake Lugano, however, lies along the eastern arm of the lake and may be enjoyed from the steamer *en route* to Porlezza; and yet, strange to say, many tourists, influenced by thoughts of Milan, rush by rail directly from Lugano to Como—thence to Milan—missing the most glorious scenery in Northern Italy. Forsaking the little steamboat at Porlezza, we boarded the train and in ten minutes were at Menaggio, on Lake Como. It has hard to realize that all this transcendent beauty was not a dream. We stood still, hardly daring to move, lest the vision should vanish. After a while, and by degrees, we moved along the beautiful shore to Hotel Victoria, where we lunched. Later in the afternoon a steamer bore us across the lake to Bellagio, where we took up our abode at Hotel Florence. The proprietor, Signor Gramattica, proved to be an ideal host, and we shall ever remember his many acts of courtesy. We passed here several days most delightfully, visiting neighboring estates famed for their situation, art-treasures and grounds, notably Villa Serbelloni, Villa Melzi, Villa Carlotta and Villa Mylius. I could easily fill a small volume with an account of our stay at this, perhaps, the most enchanting spot in the Italian lake-district. Lugano and Bellagio are close rivals in respect to natural charms. But we were birds of passage and, with heavy hearts, we took our places on the steamer "Addio," which conveyed us to Como. Thus we saw the Southern portion, *i.e.*, the



WILLIAM A. FRENCH  
MORGENTHAU, LAKE LUGANO  
MORGENTHAU AT LUGANO





WILFRED A. FRENCH

LUGANO, ITALY

south-western arm of what many consider the most beautiful lake in Upper Italy. The peculiar volcanic formation of the mountains, enclosing the Italian Lakes, gives this region a beauty and charm entirely its own. The boat zig-zagged along its course, stopping at the principal stations on each side of the lake. It was a constant change of scene along these exquisitely beautiful shores, dotted, as they are, with towns and villas, gardens and vineyards, groves and terraces. Above these rose the glorious mountains and deep blue sky — all melting into one grand and harmonious picture, that ravished the eye and transported the soul. At Como we reluctantly set foot on mother earth, surprised to find that this memorable sail had lasted two hours! One hour later we were in Milan.

Here we devoted most of our time to the splendid cathedral and the relatively new art collection of the Palazzo Poldi-Pezzoli. The latter, although dwarfed by the dazzling magnificence of the cathedral, astonished us by the beauty and variety of its many art-treasures, notably the well-nigh priceless pictures by Luini, whose works are extremely rare. It is difficult to conceive anything more exquisite in painting than his "Marriage of Saint Catharine." It is a masterpiece of drawing, composition and color and, having been carefully guarded by its owners for over three hundred years, it still exists in its pristine freshness and beauty — just as it left the hand of the master. It is, probably,



WILFRED A. FRENCH  
 SUNSET ON LAKE COMO FROM BELLAGIO  
 MARBLE GROUP OF DANTE AND BEATRICE, VILLA MELZI





the most valuable canvas in Milan. We made repeated visits to the large and sumptuously furnished rooms of this wonderful palace, so generously bequeathed to the city of Milan by the last surviving member of the Poldi-Pezzoli family, recognizing in the superb examples of painting, sculpture, cabinet-work, porcelain, jewelry, armor and weapons, objects that interested us far more than anything in Milan, except, of course, the dazzling marble wonder. We wasted no time on the pitiful wreck in the *Santa Maria delle Grazie* — for several centuries the glory of Milan. Dampness and clumsy restoration have destroyed every visible vestige of the divine creation and Leonardo's masterpiece now exists only in the form of the faithfully-interpreted engraving by Raphael Morghen. We passed a few hours profitably in the Brera Gallery, inspected the gorgeously decorated interior of *San Alessandro* and were off for Venice the following morning. We took the most direct route, via Bergamo, Brescia, Verona and Padua. At Desenzano a magnificent prospect of Lake Garda was unfolded, and another, though less extensive, at Peschiera. When the train halted at Verona we regretted that necessary haste robbed us of the opportunity to study its noble antiquities, led by the Roman Arena. The ladies were relieved to be informed that the so-called "Tomba di Giuletta" had no connection, whatever, with Shakespeare's heroine, although, like the alleged "Old Curiosity Shop" in London, it makes a successful sympathetic appeal to thousands of credulous tourists. The journey now became less interesting, but was relieved of monotony by superb views of the Tyrolese Alps, stretching before us to the northward. Extensive groves of lemon trees filled with gleaming fruit lay along our route, also the sites of famous battle-fields reminiscent of the campaigns of Napoleon and Victor Emanuel. Our arrival at Padua, whose famous basilica of St. Anthony could be easily seen from the station, did not seem to stir the emotions of my companions, who merely asked how soon we should reach Venice. No sooner had the train resumed its course, than thoughts of Giotto's charming frescoes in the little chapel at Padua had vanished, giving way to the one supreme topic — Venice! After passing Mestre, the eager ones of our company kept gazing intently towards the East. Exclamations of joy accompanied by hand-clapping, proceeding simultaneously from all the compartments and the crowded passageway, indicated that we were greeted by the first sight of Venice. Sure enough, several miles away we discovered a dark-blue line of towers and churches, rising out of the sea. It was, indeed, the Queen of the Adriatic. Soon the train crossed the lagoons by the enormous bridge and as, one by one, notable architectural features were recognized, jubilant demonstrations yielded to silent admiration, and several of the women-passengers lost entire control of their feelings. It was sad to realize that many of this enthusiastic company were destined to be cruelly disenchanted.

The glory of Venice lies chiefly in its past. The Venice of to-day is not the Venice of yesterday. The once proud and magnificent city of the Doges has long since passed away and her stately buildings are rapidly approaching decay, which no human hand can avert or arrest. Still, for many years to come her



BERNARDINO LUINI  
PHOTOGRAPHED FROM THE ORIGINAL PAINTING

MARRIAGE OF SAINT CATHERINE

art galleries will give infinite joy to picture-lovers, while her wonderful aquatic charms will ever attract the painter, as they have inspired Turner, Ziem and Lansil. To him who visits Venice without a knowledge of her history, the numerous churches and palaces convey no meaning and to him the hoary square of St. Mark and the columns of the *Piazzetta* tell no story. People lacking in this regard — and the large majority of tourists belong to that class — find satisfaction only in gondola rides, and then solely in propitious weather or at moonlight. But it sometimes rains in Venice and the number of lunar nights is limited. As we stood on the Rialto Bridge late in the afternoon, wondering



WILFRED A. FRENCH

PONTE DELLA PAGLIA, VENICE

why the sun had withheld its radiance since our departure from Milan, we were conscious of a sudden stillness all about us. Turning our gaze in a westerly direction, we observed a ruddy glow in the sky, which steadily deepened. We instinctively faced the other way, and — what a transformation! The tops of the buildings appeared as if tipped with gold. The clouds above us were aflame, and below the waters of the Grand Canal blazed with reflected splendor! Around us and on the *fondamente* below everybody stood and gazed as if under a spell. Then gradually the glow diminished in intensity until, at last, it had faded away, followed by a soft, silvery light, proceeding from the Queen of the night just emerging from her obscurity behind the clouds. Thus we enjoyed that evening, and quite unexpectedly, a moonlight excursion to the *Lido*, experiencing that restful, lulling sensation, that only a gondola can give. Thanks to photography, the sights of Venice are as well known to the stay-at-homes as to the Venetians themselves; so why go through the list? Intelligent preparation for this visit enabled us to exercise discrimination in our tours of inspection. We examined the faded glories of the Doges' Palace, admiring particularly the mural paintings of Robusti and Caliari; stumbled over the irregular mosaic pavement of the Basilica of St. Mark; meandered thoughtfully through the ancient arsenal, despoiled of its contents by the French and the Austrians — wondering why, at least, the historic *Bucintoro* had not been spared — and peered trustingly into the dungeons of the *Prigioni*. We gave freely of our sympathy to the numerous tottering bell-towers (*campanili*), whose collapse is averted by means of iron supports; sighed at the innovation of passenger-steamers, scurrying and tooting along the venerable *Canale Grande*, and trod the floors of ancient



WILFRED A. FRENCH  
 CANALE DI SAN TROVASO, VENICE  
 SCENE ON THE FONDAMENTA DELLE ZATTERE



palaces, whose art-treasures and sumptuous furnishings have long since been dispersed. A few, however, of the nearly one hundred famous palaces still make an impressive display of pictures and interior decorations, such as the *Palazzo Vendramin* and the *Palazzo Giovanelli*, the inspection of which gave much pleasure.

Although four months had passed since the collapse of the great Campanile, the incident was still the chief topic of conversation among the inhabitants. The loss of this familiar landmark was deplored chiefly for sentimental reasons. The huge tower was never considered beautiful. I had always enjoyed the superb view afforded from the summit. One missed Sansovino's admirable bronze statues of Apollo, Pallas and Mercury, also the beautiful bronze gates, fragments of which lay piled up in the court-yard of the Doges' Palace. The remains of the tower and the *Loggetta* had been conveyed to the *Gardini Pubblici*, where we saw them later. We could not help being surprised to learn that so few tourists concern themselves about the justly celebrated painting of "Santa Barbara" by Jacopo Palma *il vecchio*, surely the noblest picture in Venice outside of the *Accademia*. We made its repository, the unpretentious little church of *Santa Maria Formosa*, our daily Mecca, for the sake of that stately and saintly figure. It is an admirable introduction to the Venetian school of painting, so brilliantly and abundantly represented at the *Accademia delle Belle Arti*. With the works of her greatest painters, Giovanni Bellini, Carpaccio, Cima da Conegliano, Barbarelli (Giorgione), Palma, Tiziano, Bonifazio, Pordenone, Bordone and Caliali (Paolo Veronese), scattered among the art-galleries of Europe, and her palaces despoiled by foreign invaders, Venice is to be congratulated in being able to offer to the world, collected under one roof, telling masterpieces of her glorious school of painting. While devoting several hours daily, to this wonderful display of pictures, we found time to visit the two venerable churches, the "Frari" and "SS. Giovanni e Paolo" — interesting on account of their splendid monuments to great Venetians — Verrocchio's noble equestrian statue of Colleoni, and other places of important historical interest.

(To be continued)



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## EDITORIAL DEPARTMENT

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The orchard lands of long ago,  
O drowsy winds awake and blow  
The snowy blossoms back to me,  
And all the buds that used to be!  
Blow back along the grassy ways  
Of truant feet, and lift the haze  
Of happy summer from the trees  
That trail their tresses in the seas  
Of grain that float and overflow  
The orchard lands of long ago.

Blow back the melody that slips  
In lazy laughter from the lips  
That marvel much if any kiss  
Is sweeter than the apple's is.  
Blow back the twitter of the birds—  
The lisp, the titter, and the words  
Of merriment, that found the shine  
Of summer-time a glorious wine  
That drenched the leaves that loved it so  
In orchard lands of long ago.

O Memory! alight and sing  
Where rosy-bellied pippins cling,  
And golden russets glint and gleam  
As in the old Arabian dream,  
The fruits of that enchanted tree,  
The glad Aladdin robbed for me!  
And, drowsy winds, awake and fan  
My blood as when it overran  
A heart ripe as the apples grow,  
In orchard lands of long ago.

— J. WHITCOMB RILEY.

### JULY

THE picture of the summer time here depicted by the poet will be reproduced many times during this month by the camera-loving enthusiast, and it is pleasant to remark that the constantly growing interest in nature is being shared in by the public at large. This is shown in no way better than by the flood of books and periodicals on outdoor life that are being published every day. They arouse an interest in nature study and bring people to know the birds, the trees and flowers better than ever before. Indeed, it is becoming a part of every well-digested system of education, to familiarize the young people with the common things of nature. Pictures, of course, are good and help very much in this work, but before the pictures can be made one must first learn what the common things of nature look like in real life.

The country child passes much of his time abroad in the fields, in the woods or along the country roads. He can name the birds and flowers and trees and insects from personal observation, but the city child's opportunities are far less. Everything that he sees is more or less artificial, something in which nature has no immediate share; yet, in many of our larger cities, there are museums and zoological gardens, where many things are displayed that the country lad rarely sees. In Washington, the pupils of the public schools visit the Smithsonian, the National Museum and the National Zoological Park, and when they are provided with cameras these excursions take on a new meaning by the pictures which they make and they learn more of what is going on in the beautiful world about them.

### PHOTOGRAPHY IN THE SCHOOLS

**B**ESIDES Nature Study, we have always maintained that the camera can be a great educational help in training the eye to line and perspective in landscape arrangement. It cultivates the faculty of observation in a child and teaches it to see the beautiful in the common things about it. For instance, in Japan, the children are taught to draw and paint with more ease and rapidity than our children write, and thus a nation of artistic people is developed. During recess they are sent out in the gardens to lie on their stomachs by the carp pools, there to memorize expressions of grace and form and color, before being taught the historic methods of adapting these to art formula. The result is art appreciation emanating unconsciously from this artistic environment, a direct and sincere method to develop taste and unfold self-expression in the child. If photography were taught in our public schools, we also would become more tasteful in our dress and home surroundings and art education would take on a new meaning for our people. Speed the time when the camera will be as necessary a part of a proper school equipment as the spelling book or the blackboard.

### AMERICAN PHOTOGRAPHIC SALON

**A**MONG the benefits accruing to the advanced workers in our beloved field through the labors of the American Federation of Photographic Clubs — one of the most potent photographic associations in the United States — is the liberal and effective manner in which it demonstrates the progress of photography as shown in this country and abroad. Thousands upon thousands of persons, deeply interested in our beautiful art, have visited the exhibition of its *protégée* — The American Photographic Salon, whose season is now drawing to a close. Press reports from the cities, where the American Salon has stopped on its trans-continental tour, indicate the splendid success which has attended each exhibition. Whether in Portland (Oregon), Minneapolis, Chicago, Toronto, Washington, New York or Boston — fifteen of the principal American cities being included in the circuit — the facilities for displaying the pictorial collection of the American Photographic Salon have been

admirable. The crowds that flocked to inspect this interesting display of foreign and native photographic art, showed an intelligent appreciation of these carefully selected products of the camera, and the projectors feel encouraged to prepare for the third season, which is to be on a still larger scale than the present one. The success of the enterprise is due not only to the energetic efforts of the management, but to the publicity accorded it by the photographic press. With becoming generosity the directors furnished the representatives of reputable photographic periodicals with data, and prints for reproduction, so that they could give their readers a clear and faithful account of the exhibition when it was about to start on its long journey through the United States and Canada. That is why the people of this country have a practical knowledge of what is going on in the photographic world, and it constitutes, it may truthfully be said, the only reliable means of disseminating photographic news. There are, however, here and there, a few small photographic clubs, whose activities, intelligent though they may be, pass unnoticed, simply for lack of publicity. If these clubs prefer to remain in a state of semi-obscurity and refrain from communicating the progress of their work to the photographic fraternity, through the proper channels, they have that inalienable right. In the meantime other photographic societies animated by a desire to advance the interests of photography along broad and liberal lines, and with becoming fairness and modesty, will gain in influence and popularity.

#### PHOTOGRAPHERS OF MEN ONLY

THE business, introduced in New York by Pirie MacDonald, of photographing men exclusively, is being followed by photographers in other large cities. In Boston John Garo has recently opened a branch studio in the heart of the finance district, where he makes an effective appeal to the sterner sex to sit before his wonder camera. About the same time Morris Burke Parkinson established a similar atelier, not far away from his brother artist, and he, also, is reaping the fruits of this commendable enterprise. The idea of enabling business men to sit for their portraits in studios very near their places of business has its obvious advantages. If the heavy financier is in a happy frame of mind before he reaches his office, he may be in a favorable mood for a sitting. Also, when he leaves his business for the day and the fates have been kind to him, he will be a welcome subject for the camera. Every man, at the close of a successful transaction, should embrace the opportunity and seek the recording sensitive plate of the photographer. Besides, the effort of sitting for his picture, has usually little fascination for the business man; he is generally too engrossed. If obliged to furnish a portrait for the family, the press or any other specific purpose, he goes about it perfunctorily and the result is not always the happiest. Ordinarily, however, the sittings at exclusive studios are made by appointment; but when the propitious moment arrives, arrangements for an immediate sitting can usually be made, thanks to the convenience of the telephone.



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## THE ROUND ROBIN GUILD

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*Conducted by Elizabeth Flint Wade. Specially designed for the amateur photographer and the beginner. Membership may be obtained by sending name and address to the PHOTO-ERA.*

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JNO. M. SCHRECK

LAST month we enjoined the members of our Historic Guild to add, as occasion presented itself, pictures of historic trees to our collection of historical pictures before the "tooth of time" had destroyed them forever.

This month the subjects which we want the members of the Guild to bear in mind and to photograph when there is an opportunity are the Old Inns of ancient note, a number of which are still in good repair.

Next to the meeting-house, the Inn, or, as it was termed in the Puritan days, the "Ordinary," was the building of greatest importance. It was obligatory on a town in those days to keep one, and the town of Newbury, Mass., was twice fined for not complying with this request.

FIRST PRIZE—TRADES

The Puritan Inn, or Ordinary, was not established simply for the convenience of travelers — indeed, a stranger wishing to linger within its gates must show a good record or he would be requested by the selectmen to "move on." The Ordinary was built for the mutual comfort of the townspeople, where they might meet to exchange news and opinions, and for sociable converse. A proof of its importance is found in the fact that it was situated near the meeting-house, and often permission to keep an Ordinary was granted on the promise that it should be kept near the meeting-house.

All ecclesiastical affairs were transacted at the Inn, even to that most despotic and jealousy-breeding of adjustments, the

"seating of the meeting-house"; while all sorts of festivities, including weddings, took place beneath its roof tree, and in troublous times it was a place of refuge.

The Inn has ever played an important part in the political and social affairs of our country. It was in the Inns that the first words of dissatisfaction were uttered which resulted in the Revolutionary War.

In the Green Dragon Inn, which Daniel Webster styled the headquarters of the Revolution, was planned that never-to-be-forgotten midnight ride of Paul Revere, the tale of which was told years after in the old Inn at Sudbury, where, —

"Around the fireside at their ease"

sat a group of friends

"Who, from the far-off noisy town,  
Had to the Wayside Inn come down,  
To rest beneath its old oak trees."

It was in Fraunce's Tavern, at a dinner given in his honor, that General Washington proposed those thirteen significant toasts to the thirteen states of the new nation, and it was in this same Inn that a few days later he bade farewell to his officers who had fought with him, and won with him, the glorious battles of the War of Independence.

It is therefore a self-evident fact that our historical picture collection would not be complete without including pictures of all the old Inns of historic note that are still extant.

There are to be found pictures of those which have been torn down or otherwise destroyed, and it is hoped that if any of our members can obtain copies of such pictures they will at once transmit them to the headquarters of the Guild at Boston.

And there is no time like the present, and while we are holiday-making, let us keep ourselves alert to discover and to preserve pictorially, at least, these relics of our Colonial days.

"Don't linger by the way,

Do it now!

We shall lose if you delay,

Do it now!"

"GRAY IT SHALL BE"

AFTER all, the most satisfactory print for the all-round photographer is the gray print, and he may choose any of the papers on the market, or better still, he may exercise his individual taste and sensitize for himself any texture of paper he chooses, from the soft, fine-grained "Allonge," which gives prints of beautiful detail, to the coarse, rough "Michallet" for negatives of broad masses of light and shade.

No matter what paper is used, it must first be salted, a process which is very simple. Make up a solution in the following proportion: To every ounce of water allow two grains of gelatine and eight grains of chloride of ammonium. Heat the water and dissolve the gelatine in it. When cold, add the chloride of ammonium, and strain. To apply the solution to the paper, pour enough of the liquid into a porcelain tray to have at least a depth of an inch. Float the sheets of paper on the solution till thoroughly wet, then pin up to dry.

The paper is better if used when freshly salted, but it may be kept some time if necessary.

The sensitizing solution is simply nitrate of silver dissolved in water, to which is added a little ammonia water. This solution is prepared by first dissolving  $\frac{1}{2}$  oz. of nitrate of silver in 4 oz. of water. Then add ammonia water, dropping it in slowly and stirring all the time until the solution, which at first becomes turbid by the addition of the ammonia, at length clears itself. In case it does not clear after 100 drops of ammonia have been added, clear by filtering.

To sensitize, pour the solution into a porcelain tray and float the paper on the liquid, salted side down, until the surface of the paper is wet. Then drain and pin up to dry, in a dark room. The work is done by gaslight or diffused daylight.

For convenience in handling, the paper is cut into sheets the size required for the negative from which prints on the paper are to be made.

This is a printing-out paper, and when printing do not carry the tone but a trifle deeper than desired in the finished picture,



A. GARTLEY

SECOND PRIZE—TRADES

as the paper does not lose in color during toning.

The paper may be toned either in a combined bath or the print may be first toned and then fixed.

A platinum toning bath gives clear gray tones. Dissolve one-half grain of platinum chloride in eight oz. of water; add a few drops of a saturated solution of carbonate of potash to neutralize the bath; then stir in one half dram of formic acid. Tone and fix in a bath of hypo; one oz. of hypo to sixteen of water.

The prints made on papers sensitized with this solution are very lovely. On the fine papers they resemble engravings, while on the rough papers they are like crayon drawings.

The finer grained papers are suitable for landscape in which there is much detail, while the coarse papers are especially good for portrait prints.

If the sheets are cut somewhat larger than the negatives, enough to allow at least two inches of margin, then the prints may be made through a cut-out, masking all parts of the paper except that over the

negative, and when finished, bound together in a book without any other mounting.

Once having tried the sensitizing of paper after this formula one will wish to use it always for his choice pictures.

#### DOUBLE PRINTING

THE printing of clouds into the sky of a landscape picture when the sky in the original is perfectly white may be made to produce very artistic effects. A chalky white sky, which is so often the sky which one is unfortunate enough to get in a landscape view, detracts very much from the beauty of the picture, and when such is the case one must resort to a double printing, first printing the landscape and then, before toning the picture, printing in from a special cloud negative.

The materials necessary for double printing are a printing frame, larger than the negatives to be printed from, orange-colored post-office paper or black needle paper, a cake of Gihon's opaque, or Strauss' marl, and two or three small paint brushes.

The paper used in making these combination prints is the printing-out, developed paper, not showing where the paper is to be masked.

If one has a landscape where the horizon line is not too much broken, make a proof from the negative, then cut the paper in two along the line of the horizon, following the outline very closely, then lay the two pieces in the sun until blackened. This gives two masks, one for the sky and one for the landscape. Print from the landscape negative until the color is of the required tone, remove from the printing frame and over the printed part adjust the mask and secure it in place by small gummed pieces of paper, those used for affixing stamps in albums being just the right thing. Place the negative from which the clouds are to be printed in the frame, adjust the paper over it, bringing the horizon in the cloud picture and that in the landscape as near together as possible, and print until the tone coincides with the tone of the landscape.

If carefully done the finished print has no appearance of having been made from two negatives.

When spreading branches of trees or irregular objects are above the horizon line, making it a difficult matter to use a mask, as suggested, take a brush charged with the paint mixed very thick and go over these objects on the glass side of the negative, following the outlines and making the covering opaque. Mask the part of the landscape below the painting with a piece of the non-actinic paper, and then print from the cloud negative.

It is a good plan to make a collection of cloud negatives so that one will have clouds adapted to his different negatives. Clouds photographed at sunset should never be printed into a negative taken in the afternoon. If one has not made himself familiar with the appearance of clouds at certain periods of the day and year, then it is wise to mark on the negative the date and time of day that the negative was made. If one is printing from a negative which includes glimpses of a lake or pond, print the reflection of

the clouds in the water also, of course reversing the negative when printing from the clouds. In doing this one will have to put the glass side next to the paper, but that will be no detriment, as it gives the appearance of depth. The printing of the reflection should not be as deep as for the sky.

There are many varieties of clouds, but the most common and the one which makes the best effect in the photographs is the cumulus, the summer cloud which floats in beautiful shapes through the sky or piles itself in huge masses, assuming the appearance of white-capped mountains.

It is of course a careful bit of work to make successful prints by combining two negatives, but the work well repays the time spent, and it is wiser to have a few good prints which are worth while, than to have dozens of mediocre merit.

#### ROUND ROBIN GUILD COMPETITIONS

First prize: Value \$10.00.

Second prize: Value \$5.00.

Third prize: Value \$2.50.

Prizes may be chosen by the winner, and will be awarded in photographic books or magazines published or advertised by us; in enlargements, art portfolios of photogravures, mounts, or other photographic materials advertised by us; or, if preferred, we will send any article of a photographic or art nature which can be bought in Boston for the amount of the prize won.

#### RULES

Membership in THE ROUND ROBIN GUILD, with all its benefits — among which the correspondence privilege probably stands first — is free to all, and we invite every photographer to become a member. Entrance in the monthly competitions is also free to all, whether subscribers to PHOTO-ERA or not.

#### SUBJECTS FOR COMPETITION

June. — "Garden Scenes." Closes July 31.

July. — "Genre Pictures," Closes August 31.

THE pictures sent in for this competition deserve more notice than merely the names of the competitors. They were very interesting indeed, and the committee had hard work to award the prizes. The winner of the first prize is Jno. M. Schreck, the second prize goes to A. Gartley of Honolulu, the third to F. P. Lotz, whose series of pictures illustrating the making of a bell is one of very great interest.

Among the pictures deserving special mention are "The Hatter," by M. A. Yauch, and "The Roadside Tinker," by C. M. Whitney, a picture of a man sitting by the roadside mending a kettle while a little girl standing by him is absorbed in watching. "Making Snowshoes," a picture by F. S. Andrus, giving a glimpse of a Canadian occupation, is very well done. John Schork is represented by an excellent picture, well posed, of a mechanic at his bench, while Ralph Burwell and George Muntz both send most pleasing studies of the village blacksmith. Willis Kerr's picture, "The Cabinet Maker," Florence M. Robert's "The Carpenter," and R. A. McIntyre's "The Shipwrights" are all creditable pieces of work.

Our members are advised to make pictures of the old trades whenever opportunity presents itself, for machine work is rapidly driving the work of the hand out of commission.

## TIMELY HINTS

PINHOLES in a negative are the bugbear of the amateur and are usually due to one of two causes, one is dust on the film before development, and the other is sediment in the developer used. One often sees advice to amateurs instructing them to dust their plates before putting them in the camera. This is entirely unnecessary and often leads to bad results from the marking of the film from too harsh treatment. Plates are dried in a dust-proof room, wrapped in papers and sealed in dust-proof boxes. Dust on plates more often occurs from the bellows or plate-holders being dusty. Wipe out the bellows once a week with a damp

cloth and also the plate-holders and slides, and in using old developer always filter before using. These grains of prevention will be worth many grains of cure.

In warm weather the edges of the gelatine often come loose from the glass or celluloid support during development. This is called "frilling," and occurs when the solutions are too warm and tend to soften the gelatine. The temperature of a developer should not rise above seventy-five nor sink below sixty-five degrees. If the developer is too warm and the plate begins to "frill," transfer it at once to a dish of cold water and cool the developer by placing in it a lump of ice for a minute or two. In the hypo use a little acid to harden the film.

In handling plates in different solutions it is often necessary to use a plate lifter, and always so when the solution is of a poisonous nature which affects the skin. One may make a plate lifter very quickly by taking a piece of stiff wire, bending it in the center and turning one half around the other to form a loop, then bending the ends in about half an inch, toward each other, making a pair of hooks by which to catch the plate. The ends of the wire should be about four inches apart so that when slipped over the plate there will be enough tension to hold the plate without slipping.

## ANSWERS TO CORRESPONDENTS

FRED K. — Beautiful tones may be obtained on matt surface paper by toning in acetate of soda and gold. The following is an excellent formula: Chloride of gold, 1 grain; acetate of soda, thirty grains; water two ounces. Dissolve the gold in two ounces of the water and neutralize with a few drops of chalk solution. Dissolve the soda in the remaining six ounces of water and add the gold solution. This bath keeps for a long time and works best when old. It should be made at least two days before using. Fix prints in a solution of hypo-sulphite of soda, one ounce of hypo to sixteen ounces of water.

D. S. WILLSON. — In making up a solution which contains alum it must be allowed to stand for at least twenty-four hours before using. Doubtless that is what is the matter with the solution which you used for toning bromide prints to sepia. The mixture not being "ripe" produced the mottled prints you describe. The alum solution for bromide prints works better the older it is, that is, up to a certain time. I have used this solution when a year old with the best of results.

B. B. C. — Do not throw away your old platinum paper, especially if it be the rough paper. Use it for glycerine prints, and you will find it will make very interesting pictures. It will not make good pictures by direct development as they are sure to be muddy, but with the glycerine, where one has the development entirely under control, you will be almost sure to get something pleasing.

M. B. — For formulas for metal developers consult the February number of the PHOTO-ERA for 1905. For other developers, including glycin, see the March PHOTO-ERA for the same year. We shall be glad to receive pictures from you for the competitions. Have each picture plainly marked with name and address and with name of competition for which it is intended.

L. L. B. — The best way to weigh or measure a grain of gold chloride is to dissolve the fifteen grains bottle of chloride of gold and sodium in seven and one half ounces of water. This will give you one grain of the gold chloride to each half ounce of water. If your formula calls for one grain of gold to four ounces of water, take three and one half ounces of water and one half ounce of the gold solution and you will have the right proportion of gold.

JANE R. — Yes, certainly you can use the lens of your 4 x 5 camera for making enlargements. See the June number for a simple home-made apparatus for making enlargements. Remember that every defect in a negative is magnified many times in an enlargement, and so use only such negatives as are comparatively free from defects.

S. M. NEWMAN. — An ink for writing titles on the dark part of a photograph is the white ink sold at stationers. It must be well shaken before using. The title may be written on the negative and will then print at the same time as the picture. Write with India ink in a thin part of the film near the edge, and the title will appear white in the finished print. Unless for commercial purposes I would not advise marking photographs in this way.

BERNARD F. — You can obtain paper ready salted of a dealer in photo supplies. In this number you will find directions for salting paper, a very simple matter to do.

CAROL D. W. — You can obtain back numbers of the *Practical Photographer* by forwarding the price of those you wish to this office. They are twenty-five cents each, and contain explicit directions and explanations of the photographic subjects of which they treat. You will find them a great addition to your photographic library. Of some numbers only a few are left, so it is well to order at once, in order to have the complete set.

A. B. R. — A bottle of retouching fluid will cost you only fifteen cents and lasts for a year or more. For ordinary retouching, such as small defects, etc., roughen the film by rubbing it over with powdered pumice stone. This gives a tooth to the smooth surface of the film and is often all the treatment necessary for the work. If you prefer to make your own retouching varnish, drop a card to the office and a formula will be sent you, as of course you would not like to wait till the next issue of the magazine.

DR. JOSEPH T. — The best way to do when you wish to make pictures in a foreign country is to go directly to the authorities of the town in which you are stopping and show your passport, and state exactly what you wish to take and what you propose to do with the picture. It is only now and then that a fee is exacted, but in the making of interiors of those public buildings to which you are given admittance it is a wise thing to give a small fee to the care-taker, before you begin work.

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# The Crucible

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## COPYING

### (1) *Maps, Plans, Unframed Drawings.*

The chief points calling for attention are first to get the copy flat and evenly lighted. This may best be done by pinning to a drawing board, or if too large for that, to a flat wall. For even lighting there is nothing as good as diffused daylight — *i.e.*, a day that is bright and clear, but yet the sun is concealed by clouds. Next to that is a room with one large or two small north-facing windows. The copy is put facing the window and the operator has his back towards the window. If a north light cannot be had, then we may equalize illumination from some other window by the use of a large white paper reflecting screen.

(2) *Glazed Pictures.* — Here we have the somewhat formidable difficulty of avoiding reflections by the glass of the picture. If the picture be hanging in a gallery where the work must be done, sometimes one can dodge reflections by tilting the picture slightly to one side by means of a wine cork, duster, etc., put between the wall and the back of the frame. If the picture can be brought into a room or studio for the purpose of copying, our difficulties are greatly reduced. The best plan is to select a somewhat dull, yet not dark, day — *i.e.*, when the light is well diffused by clouds but the air free from mist or fog. Place the picture against a wall or easel, where it hangs truly vertical. Next obtain a piece of black, dull (non-shiny) cloth which is at least twice as long and twice as wide as the picture. In the center of the cloth make a circular hole the exact size of the lens hood, so that it is a fairly tight fit. Now place the camera with lens opposite the center of the picture and with the axis of the lens perpendicular to the plane of the picture. Be careful to have the ground glass truly vertical. Having adjusted the lens, camera and focus, then suspend the black cloth

shield parallel to the picture — *i.e.*, in a vertical plane — and arrange for the lens hole to slip over the hood without disturbing the camera or causing any crease in the cloth. By this means the only thing that can be reflected in the picture glass is the black cloth.

(3) *Focusing.* — The best thing to see in a dim light is a bit of clearly printed matter in medium-sized type, such, for instance, as that used on this page. One can generally find something in the advertising sheet of the newspaper. Tear out five pieces, and with a touch of mountant stick one bit in the center of the glass and the other four towards the corners of the picture. N. B. — Do not forget to remove these bits of paper *before* the exposure is made.

## DARK-ROOM LAMP FOR ORTHOCHROMATIC PLATES

OBTAIN three sheets of thin common glass. Wash these thoroughly in soap and water to which some household liquid ammonia has been added. We now require a small quantity of three aniline dyes, viz., Naphthol Yellow, Methyl Violet 6B, and Aurantia. Suppose our glasses are each a foot square. Then make two ounces of a saturated solution of the first dye, and another two ounces of saturated solution of the last-named dye. But of the methyl violet we require not a saturated solution, but one which is a good rich deep violet when we have half-an-inch depth of the solution in a white porcelain dish. Next put these three solutions in three separate small jam pots. To each add from 35 to 40 grains of shredded gelatine (household cooking gelatine will serve if the better quality used by photographers is not available). Let this gelatine soak in the three jars of colored water until soft, and then put the jars on a tray on the oven top, and with three separate glass rods stir until the gelatine is quite dissolved. Then take one of the

cleaned sheets of glass and make it warm in front of the fire and lay it on a sheet of newspaper which rests on a drawing board which has been carefully leveled.

Then pour a pool of one of the colored gelatines in the middle of the plate (avoiding bubbles or frothings), and lead the gelatine with the glass stirring rod up to, but not over, the edge of the plate and wait until the gelatine has set. The plate may now be set up on edge in a warm room to dry thoroughly. The other two plates are coated in the same way, giving us three different colored screens. These are placed together, gelatine side inwards, and bound together by some strips of lantern slide tape. We now have a screen which passes only the red rays in the far end of the spectrum, and there are very few, if any, plates which are fogged by this light unless they be exposed to it for a considerable time. Of course, it is only to be expected that a lamp screen safe for orthochromatic plates will only pass a very feeble light. Whenever possible, it is best to develop ortho plates by the timing system, and so avoid exposing them to any dark-room light beyond that just necessary for transferring them from the plate holder to the dish.

#### FILTERING HINTS

BEAR in mind that the operator in filtering exposes the liquids to the action of the air a drop at a time, and therefore gives the air the very best chance possible of doing its oxidizing worst. Bear in mind, also, that in preparing our developing solutions we add a "preservative" with the idea of preserving the developing agent from the oxidizing action of the air. If then we filter a made-up developer, we are undoing more than half the work. What, then, is to be done? Well, first dissolve the preservative and all else except the developer, filter, and then add the developer. For example, take the case of a good all-round M.Q. developer good for plates, papers or slides. In 20 oz. warm water dissolve 1 oz. soda carbonate, 1 oz. soda sulphite, and 5 grains potass. bromide. When thoroughly dissolved, then filter, and after that add 30

grains metol and 30 grains hydraquinone, but do not filter again. Solutions containing pyro should not be filtered, as this solution during its slow progress through the paper would be greatly spoiled.

Very often one can avoid filtering entirely by allowing the sediment to fall to the bottom of the bottle and then very slowly tilting the bottle and decanting.

#### TEMPERATURE OF FIXING BATH

*A Cold Fixing Bath will Cause Stain.* — In attempting to locate the cause of deep yellow stain which occurred with fresh developer and clean fixing bath, the trouble was at last traced to the fixing bath. It was noted that the temperature of the latter was extremely low, and when tested proved to be only 40 degrees F. A portion of this bath was then heated to 65 degrees F., and a plate exposed and fixed in it, with the result of total disappearance of the stain. We tried this by exposing two quarter-plates in a stereoscopic camera, developing together, and fixing one in a hypo solution cooled to 35 degrees F., and the other in a bath at 60 degrees F., with precisely similar results. The cold fixing bath gave a deep yellow stain, and the warm one perfect freedom from the same. — B. J.

#### BLACK TONES ON P. O. P.

THERE are two easy means of producing good black tones on Solio paper. One bath is as follows:—

Chloride of gold.....	4 grains
Sodium bicarbonate.....	1½ drams
Water.....	6 ounces

Print rather deeply, wash fairly well to remove the excess of silver salt, and tone in above bath for, say, three minutes, wash, fix in fresh hypo bath for fifteen minutes, and wash well. This bath must be made up as required.

By the other method, the print should be toned in the following solution until it assumes a chestnut brown; then transfer it to the combined toning and fixing bath and tone to the desired color.

Sodium acetate.....	150 grains
Gold chloride.....	5 "
Water.....	40 ounces



# The Filter

## A CAMERA COURTSHIP

SHE gave him a cabinet photo;  
He gazed for a moment or two,  
Then pleaded: "Sweetheart, won't you  
give me  
The lovely original, too?"

"If you're positive, dear, that you love me,"  
She said, through a film of tears,  
"A negative I cannot give you;  
I'm yours to the end of our years."

So the courtship was quick to develop,  
Their marriage was fixed up in town,  
And now in a middle-class suburb  
She is steadily toning him down.  
—*Camera House Journal*.

## MARIE CORELLI POST-CARDS

THE ever sensational Marie Corelli appears very ridiculous in her latest conflict with public opinion. Successful self-advertising is not the least of her accomplishments. She now fumes and storms against the circulation of picture post-cards, on which appear her precious personality, her ponies, dog and gondola, photographs taken at Stratford-on-Avon. She is unable to stop it. The question naturally arises that if she did not want these pictures circulated, why did she pose for the photographs? An anxious public awaits the answer.

## JUST SO

THEY met on a bridge. Each held out his hand, and they shook, and instantly realized that they were utter strangers. Had not one of them been a genuine Hibernian the situation might have been embarrassing.

"Begorra, that's quare," says Pat. "When we wor so far off that we couldn't see aich other I thought it was you, an' you thought it was me, an' now we're here together it's nayther of us."  
—*Tit-Bits*.

## WANT COLUMN

WANTED — An automatic cook; must bring good reference from former employers as to honesty and morality; also assurances that all her springs are in good working order. No followers allowed.

WANTED — A man who will not sulk when his breakfast does not please him.

WANTED — A man who will tell his wife exactly what his cigar bill is. Address Lock Box 716.

WANTED — A Baptist deacon who will not cheat in a horse swap.

WANTED — A man who will not carry a letter in his pocket more than twelve hours after his wife has given it to him to mail.

WANTED — A woman who will not buy what she really does not want at the bargain counter.

WANTED — A man who will acknowledge his wife's cooking is as good as his mother's.

WANTED — A married woman who will acknowledge she ever kissed her husband before she married him.

WANTED — A married man who does not claim he is boss in his own house.

WANTED — An old maid who does not know how to raise another woman's children better than she does.

WANTED — Divorce and appendicitis banished by high thinking and plain living.

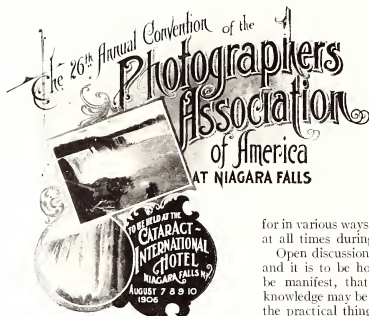
WANTED — Babies to be regarded as well-springs of joy in every home.

WANTED — A publisher who knows good literature and so can appreciate my literary efforts and will accept with thanks and a check. A large amount preferred to a small one.—*Mobile Register*.

## A SPRING DECLINE

Billy. — "Did you ask her to be your wife?"

Lostem. — "Yes, but she declined the nomination."



### WAKE UP!

NEWS FROM THE FRONT FORETELLS A  
BOOMING CONVENTION AT NIAGARA FALLS,  
AUG. 7, 8, 9, 10, 1906

#### *Location*

NIAGARA FALLS needs no pen picture to tell of its charms as a place of recreation or rest. During the heated months, probably no spot on earth entertains more people from all sections of the globe. Those who have once had the pleasure of stopping at this famous resort, are the ones most desirous of returning. Those who live in anticipation of visiting this historic scene, especially of our fraternity, should avail themselves of this opportunity to combine recreative pleasure and wholesome interchange of thought, along the lines which will be presented by the PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

#### *Policy*

This year's convention assumes a new departure from the well-trodden paths of past meetings, in the fact that business

methods are to prevail, as against the older theories of crowding Art to the front to the exclusion of the vital business principles so essential to a well-conducted and successful studio.

The foregoing must not be implied to mean that Art will be neglected, but on the other hand, it is to be carefully cared

for in various ways, making itself apparent at all times during the convention.

Open discussions are to be encouraged, and it is to be hoped much interest will be manifest, that through this channel knowledge may be imparted. It is always the practical things that are taken home with you, the visionary theories are left behind. Come prepared to tell the good things you know to your neighbor.

#### *Exhibits*

It is not too early to announce that the pictures to be exhibited this year will be pictures of quality, such as will afford a lasting interest to the best students of our profession. Let every interested member of the Association who has not already made known his good intentions, prepare a few pictures for this grand collection, made up from his best efforts of the year.

#### *Salon*

Remember the twenty-five pictures which are to be selected for Salon honors. One picture only to be taken from any one studio collection. Such selected pictures to be further honored by being published (with consent of owner) in next year's *Review*, the Association annual. Portrait, studies or views will be considered in this selection. Why not be one of the twenty-five? This means you.

## NOTES AND NEWS

### *Commercial*

Since the organization of the Photographers' Association of America there has been combined with the support of photographers the loyal support of manufacturers and dealers, and this Association desires to be placed on record as appreciating the continual and harmonious blending of interests.

The history of this Association, now in its twenty-sixth year of usefulness, working upon a sound financial basis, representing the largest and most influential photographic association in the world, will cause the P. A. of A. to count the commercial as well as the artistic needs of photographers.

### *Hotels*

The Cataract-International Hotel, situated on the bank of Niagara River near the Falls, will be headquarters for the 1906 convention. In the Cataract section of this hotel will be the manufacturers' exhibits, the Art exhibits, and the lecture rooms for daily sessions, with ample room for all. Most of our members will be registered in this section of the hotel, rates being from \$3.00 to \$5.00 per day on the American plan. Our committee would like to have members of the Association, if agreeable to them, in the Cataract section of the hotel, that we may be able to exclude all strangers and control the hotel as our own. This has been guaranteed to us if we can fill it. *Let us try.*

Many other hotels which have been previously mentioned in the journals at lower rates, all American plan, are to be recommended.

### *Rates*

Arrangements have been perfected for reduced rates covering the United States and Canada, from the Atlantic to the West, including Colorado, Texas, Kansas, Nebraska and the Dakotas. Parties west of these States can purchase tickets to mentioned State lines, and from there on secure the reduced rate.

The rate granted is on the certificate plan, one rate going, one third fare returning. When purchasing tickets at starting-point, ask for certificate, which will be given you by your ticket agent. Upon your arrival at Niagara Falls this ticket must be deposited with the treasurer, F. R. Barrows, to be validated by Joint Agent. A fee of 25 cents will be charged upon delivery of validated certificate. **DON'T FAIL TO SECURE THESE CERTIFICATES FROM JOINT AGENT BEFORE CLOSE OF THE CONVENTION.**

This validated certificate is to be presented to ticket agent for return trip, and in exchange for same the holder will be sold a return ticket for one third fare. These certificates will in no case be honored if presented by other than the original purchaser. Going tickets may be purchased from August 3 to 9, and validated certificates will be honored to August 14, inclusive. *Note:* In no case accept receipt for money paid for going ticket instead of certificate, as it will not be honored by railroad agent at convention. If ticket agent is not supplied with certificates, he will inform you of nearest point where one can be secured.

### *Membership*

Any person desirous of becoming a member of this organization, who is a studio proprietor, or employer of help, shall be required to pay a membership fee of \$3.00 and one year's dues of \$2.00, a total of \$5.00. Send above amount with full name and permanent address, using street and number, to the Treasurer, F. R. Barrows, 1873 Dorchester Ave., Boston, Mass. Employees are only required to pay the annual dues of \$2.00, but in making application for a membership must furnish letter of endorsement from employer.

### *Dues*

Members in good standing are required to pay their dues in advance of our meet-

## NOTES AND NEWS

ing. This will save you a long wait at box window, and will materially lessen the arduous duties of your treasurer. Send dues to above address and DO IT NOW.

### *Entertainment*

This feature of our convention is in the hands of a capable committee who are planning a good time for everybody, both ladies and gentlemen. No place offers more attractions to help them in carrying out their plans. Come and help them to make merry.

### *Guarantee*

Back of all promises our committee is making, regarding this convention and its accommodations, stands the guarantee of Mayor Cutler of Niagara Falls, a man who will see that no extortion of rates shall be practiced upon our people.

The citizens as a whole are determined to overcome all past prejudice regarding unjust charges.

This week will be PHOTOGRAPHERS' WEEK at Niagara Falls, for the Mayor told us so.

### WILL YOU BE WITH US?

Fraternally yours,

F. R. BARROWS,

*Treasurer P. A. of A.*

### NIAGARA FALLS CONVENTION

"On to Niagara" should be the watchword of all photographers interested in their craft. Are you one of them and are you ready? Have you that exhibit ready to help make the best collection of portrait photography ever shown at a National Convention? It is not the large number of pictures we want so much as the high quality of same.

There will be only two classes of exhibits — Complimentary, and for Salon Honors. For the latter, the best twenty-five pictures will be selected by the judges to hang as "A Salon Exhibit." What more could you wish for than the honor of having one of your pictures selected as one of the best twenty-five portraits of

the convention? Is it not as great an honor as winning a medal or trophy? The convention will be asked to authorize the reproduction of the twenty-five Salon pictures in next year's Association annual.

Now, get busy and have your exhibit ready. We want it. We want your presence and want you to help make the Niagara Falls Convention the success it is bound to be. The profit to you will be great and it will repay you an hundred fold for the few dollars it costs in railroad fare and a few days' hotel expense.

Mark your exhibit "Complimentary" or "For Salon Honors" and "Express Prepaid," C. J. Van Deventer, 1st Vice-president, Cataract International Hotel, Niagara Falls, N. Y. Ship them to reach us not later than August 3, and don't fail to be there the 7th, 8th, 9th, 10th, to enjoy the feast of good things prepared for your artistic craving.

Fraternally yours,

C. J. VAN DEVENTER,

*First Vice-president P. A. of A.*  
Decatur, Ill.

At the annual meeting of the Portland Camera Club the following officers were elected: President, S. S. Skofield; vice-president, J. R. Peterson; secretary and treasurer, O. P. T. Wish; lantern slide director, C. W. Dearborn; executive committee, C. F. Berry, H. A. Robert, C. W. Dearborn, O. P. T. Wish, G. E. Fogg, Malsen Tinker, F. W. Shaw, Ernest Gerhardtts, R. A. Crosby; membership committee, B. W. Guppy, C. A. Weber, W. J. Hoyt.

The reports showed the club to be in a flourishing condition, with bright prospects for the coming year. The club exchanged exhibits this spring with the Boston Camera Club, at the rooms of which members of the PHOTO-ERA staff had the pleasure of admiring an excellent collection of pictures from the Pine Tree State, which fully demonstrated the genius and versatility of Portland men and their right to a place among the foremost pictorialists of this country.

# NOTES AND NEWS

## SAN FRANCISCO FUND

THE Western Section, P. P. S. N. Y. desires to acknowledge the receipt of the following contributions to the fund for the relief of the California photographers who suffered through the recent earthquake and fire:

E. F. Hall	Buffalo	\$ 5.00	
F. Jas. Sipprell	Buffalo	5.00	
H. D. Beach	Buffalo	5.00	
J. Geo. Nussbaumer	Buffalo	15.00	
<i>(collected)</i>			
Chas. E. Hunt	No. Tonawanda	5.00	
H. E. Romer	Manlius	5.00	
A. H. Harscher	Pittsford	5.00	
A. B. De Groat	Bath	5.00	
A. B. Stebbins	Canisteo	5.00	
Fred Robinson	Ithaca	5.00	
A. J. Richards	Medina	5.00	
Thos. Smith	Niagara Falls	5.00	
E. L. Graff	Oxford	1.00	
C. P. Sutton	Hornellsville	2.00	
C. B. Van Buren	Ithaca	1.00	
Irving Saunders	Rochester	5.00	
Edw. Calhoun	Rochester	5.00	
W. M. Furlong	Rochester	5.00	
J. E. Mock	Rochester	1.60	
H. L. Spedding	Rochester	1.00	
J. N. Heberger	Rochester	5.00	
F. E. Bader	Rochester	1.00	
A. L. Lehnkering	Rochester	2.00	
John Smith	Rochester	1.00	
I. H. Luce	Rochester	5.00	
W. H. Denio	Rochester	1.00	
H. C. Gorton	Rochester	5.00	
L. DeAmanda	Rochester	1.00	
C. H. Smith	Rochester	3.00	
Marks & Fuller	Rochester	10.00	
N. V. Hibbard	Rochester	2.00	
J. H. Coughton, Jr.	Rochester	5.00	
Chas. Zoller	Rochester	5.00	
Dudley Hoyt	Rochester	5.00	
P. P. S. N. Y. (Local)	Rochester	37.25	
<i>(Entire amount in treas.)</i>			
L. B. Elliott	Rochester	10.00	
Theatre Benefit			\$189.25
Total receipts		\$712.40	
Advertising, printing, etc., \$ 73.50			
Theatre rent	250.00	323.50	\$388.90
			\$578.15
May 9, N. Y. draft payable to Secretary Photographers' Association of California.			500.00
			\$ 78.15
Balance			4.95
Various donations			\$ 83.10

THE Professional Photographers' Society of Rochester gave an entertainment recently in the Cook Opera House for the benefit of the San Francisco photographers whose studios were destroyed. It was estimated that night by Dudley Hoyt, chairman of the committee in charge, that more than \$1000.00 had been raised.

Preceding the entertainment John J. McInerney made a short address, saying that although Rochester had not re-

sponded as liberally as some cities had done, the people were still working for the relief of the sufferers and eventually Rochester would make as good a showing as other cities. A flash-light photograph of the audience was taken, a copy of which is to be sent to San Francisco with the contribution.

Orders for one hundred of the pictures were taken, the material for finishing the pictures having been donated by one of the camera supply manufacturers, and the money all to be sent to San Francisco. Carnations to the value of \$25.00 had been donated by local florists and were sold in less than ten minutes. A donation of candy was disposed of in about the same time.

## TELGMAN AND TORKA

As an instance of the enterprise and indomitable courage of San Francisco concerns that lost practically everything in the recent earthquake disaster, may be cited the fact that Telgman and Torka, general agents for C. P. Goerz on the Pacific Coast, resumed business immediately at 1107 Turk St., where they now carry, as heretofore, a complete line of Goerz lenses, Trieder binoculars, Anchutz cameras, Sector shutters and other apparatus. Their factory is being built in the meantime on a much larger scale, and is being fitted at a considerable expense with improved machinery of the very latest and most improved design. The repair department has not been forgotten and will be fully up-to-date and provided with increased facilities for handling the work of their many patrons in a prompt and satisfactory manner.

C. P. Goerz generously offers to extend, through Messrs. Telgman and Torka, all possible facilities to photographers who have lost their belongings in the recent catastrophe, and to help them to reopen business through the loan of lenses and apparatus, or by extension of credit whenever necessary, or by any other means at their disposal.

## NOTES AND NEWS

EXCELLENT in appearance and contents, as *The International Studio* always is, that valuable monthly magazine has surpassed itself in the June issue, which has afforded us genuine pleasure to peruse. In matter and illustrations, this number is sumptuous, indeed. The articles relating to the fine arts are delightfully original and of permanent value, being penned by authorities of international reputation. Of special interest to artists and students are "The Art of the Late Arthur Melville, R. W. S., A. R. S. A.," by T. Martin Wood; "Herr Thomas Knorr's Collection of Modern Pictures in Munich," by Constanza Hulton; "The Work of the Spanish Sculptor, Don Agustin Querol," by Charles Rudy; "The Drawings of L. Pasternak," by P. Ettinger; "Rothenburg the Fantastic," by C. E. Eldred; "The Royal Academy Exhibition, 1906"—all of which papers are splendidly illustrated, the half-tone cuts being of remarkable excellence. A well-written and copiously illustrated article on designs for a bungalow is valuable and timely. The regular "Studio Talk" from the principal art centers of Europe and the United States, contains a mine of reliable information interesting to all art lovers. These letters are likewise interspersed with admirably executed reproductions from original and carefully selected art works. The American section is devoted to the Philadelphia Water Color Exhibition; The Recent Exhibition of the Minnesota State Art Society; The Photo-Secession: Its Aims and Work; Schools and Institutions; Current Art Events; Book Reviews and "Nature's Aid to Design," each and every subject being carefully illustrated. Seldom has a work of this kind — although *The International Studio* is in a class by itself — appealed so strongly and so sympathetically to the cultivated art sense, and we can only congratulate the publishers on the rare and splendid success of their intelligent and painstaking efforts.

THE Second American Photographic Salon, held in Chicago, in March, was such a success financially that it afforded the Chicago Camera Club the means to enlarge its quarters and add new equipment. The club rooms, closed for some weeks while these improvements were in progress, were opened on the evening of May 24 with a large attendance.

On that occasion there was a special print exhibit by two of the foremost pictorial workers of the country, Mrs. Sara Holm and Mr. Louis Albert Lamb of Chicago. A box of lantern slides, from the California Camera Club of San Francisco, was also shown. A collection was taken up for the benefit of the latter club, which fared disastrously in the recent calamity.

The Chicago Camera Club is in a flourishing condition, having a membership of nearly one hundred, and ranks among the leading photographic clubs of the country.

THE beautiful study on page 7 of this issue, "Bathed by Sun and Sea," by Dr. R. W. Shufeldt, is one of the many illustrations of a similar character which will be a strong feature of his forthcoming book, "Studies of the Human Form," soon to be published by F. A. Davis & Co., Philadelphia, Pa. We reproduce this print by special permission from the maker and his publishers.

At the annual election of the Photographic Section, Academy of Science and Art, of Pittsburg, May 8, the following officers were chosen: President, C. C. Reiter; Vice-president, R. D. Bruce; Secretary, J. M. Conner; Treasurer and Director of Lantern Slides, W. McK. Ewart; Judges: Samuel A. Martin, Rev. D. R. Breed, H. F. Walbridge; Program Committee: Dr. Roger Williams, Wm. McG. White, C. W. Davis. With these efficient officers the society may look forward to a prosperous year.

# NOTES AND NEWS

## BROOKLYN CAMERA CLUB

## P. A. OF I. CONVENTION

ONE of the most enthusiastic and best enjoyed meetings of the Brooklyn Camera Club was held on Tuesday evening, April 24, at the photographic studio of Mr. Samuel Lifshy, 88 Manhattan Ave.

Upon the pretext of the necessity of immediately considering important business, a committee of the members had prevailed upon President Wm. T. Knox to call a special meeting, the real object, however, being to honor the President and Mr. Wm. H. Zerbe, the Vice-president, through the presentation of a sterling silver loving cup to each.

The report of the Treasurer, Mr. Merri-gan, showing a cash balance of \$167.50, was well received. It was voted to hold a photographic outing in May or June, the selection of date and the details of the trip being left to the Ways and Means Committee for solution.

For the relief of the San Francisco refugees the sum of \$10.00 was appropriated and the Treasurer authorized to forward this amount to the proper authorities.

The upper studio, meanwhile, had been transformed into a Japanese Garden, in the center of which the banquet table had been tastefully arranged. Here, beneath the soft light of innumerable shaded electric bulbs, amid branches of apple blossoms, the members made merry until long after midnight.

In a neat speech Mr. Lifshy, on behalf of the club, presented to Mr. Knox a massive loving cup in sterling silver, following this later with a similar courtesy to Mr. Zerbe. Both recipients responded in a happy vein, although the thoroughness of the surprise considerably ruffled the usually calm serenity of these suave and many-times-honored officials. Other prominent members also spoke.

Preparations are now well under way for spring pictures, and the coming season promises to be one full of enjoyable activity along photographic lines.

EDWIN O. TORBOHM, *Sec'y. pro tem.*

At the close of the convention, Thursday, May 24, the newly elected officers of the P. A. of I., consisting of President, S. W. Stout, Paxton, Ill., 1st Vice-president, W. M. Henshel, Chicago, 2d Vice-president E. E. Jay, Paris, Ill., Secretary H. C. Lines, Evanston, Ill., Treasurer, R. H. Mann, Virginia, Ill., met in special session in the parlors of the St. Nicholas Hotel to map out plans for the success of the Chicago Convention. Each officer is a committee of one to keep the ball rolling from now on and make the 1907 convention a winner. We ask the hearty support of every photographer in the State, and want you to help spread the news so that the next convention will be the most instructive and the most enthusiastic ever held in the State of Illinois.

Grand Portrait		Towles Studio, Washington, D. C.
Class A	1st	Melvin Sykes, Chicago, Ill.
	2nd	C. J. Erickson, Dixon, Ill.
Class B	1st	C. J. Erickson, Dixon, Ill.
	2nd	C. E. Wilkins, Freeport, Ill.
Class C	1st	H. B. Modlar, Woodstock, Ill.
	2nd	A. A. Heath, Pontiac, Ill.
Smith Trophy		H. Weibner, Quincy, Ill.
Cabinet	1st	H. C. Lines, Evanston, Ill.
	2nd	C. J. Erickson, Dixon, Ill.
Miniature		Chas. Omhart, Girard, Ill.
Special Class		E. C. Pratt, Aurora, Ill.

The Smith Trophy becomes the property of Mr. H. Weibner, inasmuch as this is the third consecutive time he has won the cup.

ANY one contemplating the purchase of a good photographic outfit would do well to pay a visit to the store of Percival Carmichael, Incorporated, 13½ Bromfield St., Boston. There will be seen a splendid stock of cameras and lenses, such as Goerz, Cooke, Zeiss and Voigtlaender Anastigmats, Anschutz, Reflex, Graffix and Century cameras, and in fact everything to comprise a good reliable outfit, and at a moderate price. We are informed on good authority that the new corporation is well equipped to meet the wants of the trade and that it starts out with every promise of success.

PHOTOGRAPHERS' ASSOCIATION OF NEW ENGLAND CONVENTION WILL BE HELD AUGUST 21, 22 AND 23 AT MECHANICS BUILDING, BOSTON, MASS.

## GRAND PORTRAIT CLASS

### Open to the World

THREE portraits from 8 x 10 negatives, or larger. One Gold Medal. No entry fee charged.

### *Class A*

Open to New England States and Maritime Provinces

Three portraits. No restriction to size. The ten exhibits receiving highest votes will be awarded Silver Medals, next twenty-five Bronze Medals.

### *Class B*

Open to New England States and Maritime Provinces

Three landscapes. No restriction to size. The two exhibits receiving highest votes will be awarded Silver Medals, next three Bronze Medals.

Three pictures must be sent to be entered in any class; over that number will be hung only at the discretion of the hanging committee.

## *Rules and Regulations*

1. All exhibits must be in the hands of the committee of hanging on or before Aug. 18, 1906.

2. Pictures entered in the competition for prizes will be awarded by popular vote.

3. Pictures may be framed or unframed at the discretion of the exhibitor, but those entered in the competition for prizes must be without glass.

4. All exhibits entered for competition shall be so marked by the exhibitor.

5. No exhibitor's name shall appear on any picture; each exhibit will be numbered. Names will appear after the awards have been made.

6. Space will be reserved for complimentary exhibits, and all photographers who do not wish to enter their work in the competition will have space reserved in this class.

7. The association will not be responsible for any loss or damage to pictures in its charge, but special precaution will be taken by the committee to insure the safe return of all exhibits entrusted to its care.

8. Art exhibits must be sent prepaid to P. A. of N. E., Mechanics Building, Boston, Mass.

9. Screw box covers instead of nailing them, with exhibitor's home address on the under side of the cover to insure the return of the exhibit.

## *Railroad Rates*

Lines granting the one and one-third rate on the Certificate Plan.

It is absolutely necessary that a certificate be procured indicating that full fare of not less than 75 cents has been paid for the going journey.

Purchase your tickets three days prior to the date of the Convention, as certificates are not kept at all stations, but the ticket agent will inform you the nearest important station where the certificates and tickets can be obtained, in which case local tickets should be purchased to that point, and then obtain a certificate and through ticket. It must be understood, however, that you should arrange to arrive at the station where the certificate and ticket are procured in ample time to allow the agent to execute same.

Bangor & Aroostook  
Boston & Albany  
Boston & Maine  
Canadian Pacific (Eastern Lines)  
Central Vermont  
Baltimore & Ohio  
Buffalo & Susquehanna  
Buffalo, Rochester & Pittsburg  
New Jersey Central  
Chesapeake & Ohio



## NOTES AND NEWS

Cumberland Valley  
 Delaware & Hudson  
 Delaware, Lackawanna & Western  
 Erie  
 Jamestown, Chautauqua & Lake Erie  
 Lehigh Valley  
 Grand Trunk R'y System  
 Maine Central  
 N. Y., N. H. & H.  
 Portland & Rumford Falls  
 Rutland  
 N. Y. C. & H. R.  
 N. Y. Ontario & Western  
 N. Y. Phila. & Norfolk  
 Pennsylvania  
 Northern Central  
 Phil., Baltimore & Washington  
 Phil. & Erie  
 West Jersey & Seashore  
 Washington Southern  
 Western Maryland  
 West Shore

J. EVANOFF,  
 Secretary of P.A. of N. E.

THE Milton Waide Metropolitan School of Photography, which has recently been incorporated, fills a long-felt want. Situated at 32 Union Square, New York City, itself an education, this practical and extensive school enjoys an ideal location in every way. The scope of the institution is of the widest, including both personal and correspondence instruction for professional, amateur or beginner who desires photographic knowledge, either for pleasure or for the making of money. Complete courses may be taken, which cover the whole subject of photography, or parts of courses may be taken separately, which give instruction in all known processes, the use of any known product, camera, lens, accessory, studio lighting, whether by window or lamp, posing, lighting, developing, printing, mounting, composition and everything relating to photography. The institution is also intended as a bureau of information for any of your small photographic troubles or little annoyances, and the price of such

aid will be from \$2.00 up, according to the time required to set you right. The faculty and equipment are the best which money can obtain. The president of the school is Milton Waide, well known for his "ONE-MAN METHOD" system, which has been so popular for the past few years. Mr. Waide recently gave up his studio at 164 Fifth Ave., New York, where he has had several years of successful business. Every pupil is promised his personal interest; and while his "method" is available to those who desire it, the school instructs in anything and everything known to photography. Good room and board will be secured for the pupils by the school for \$5.00 per week, and the institution has also arranged to obtain good positions for graduates through the Labor Bureau of the Professional Photographers' Society of New York.

It is the earnest desire of the school that it be used as a bureau of information at any time. It requests that you write fully of any difficulties which may confront you or any new photographic process which you wish to try. Visitors in the city are cordially invited to call and inspect the equipment of the institution, where a convenient dark room will always be found at their service.

ETCHOGRAPH plates, made by W. Jay Little, 363 Boylston St., Boston, Mass., open up a greater wealth of possibilities than any other process which has been brought to the attention of the photographic world in a long time. The plates consist of thin sheets of transparent celluloid, coated with a non-actinic ground which may be readily etched away. The plates were intended primarily for converting photographs, paintings and the like into line, but it has since been discovered that they possess many other possibilities, and solve many of the photographer's most difficult problems.

If a photograph or painting is to be reproduced, the etchograph plate is

placed upon the original, the outline and shadows are traced with an etching needle, and the whole body of the plate is filled in with tiny lines in a sketchy manner. When finished the plate may be used as a negative and printed on any photographic paper, such as sepia platinum, the result being an etching of rare beauty. Etchographs may be made from life or from nature's most beautiful landscapes by means of the etchograph camera which fits any tripod, folds compactly to  $4\frac{3}{4} \times 8\frac{1}{4} \times \frac{5}{8}$  inches and fits the coat pocket. The success of many portrait studies made by some of our greatest photographers is the result of backgrounds from nature painted upon the negative. By no method can these beautiful backgrounds be secured so easily and satisfactorily as with the etchograph camera. By its use no background work upon the negative itself is necessary, since the etchograph plate carries it and the same negative, therefore, lends itself to several different methods of treatment, and can be used with a variety of backgrounds. The price of the camera is \$3.00.

Another advantage of the etchograph plate is its use as a substitute for intensification and reduction. For this purpose the plate is laid over the negative and both are printed through simultaneously after the plate has been scraped thin over dense portions of the negative and built up if necessary over thin portions. A special variety of the plates gives a stipple effect and when printed through, using a hard negative, the effect produced is that of a gum print.

**MAGNESIUM LIGHT PHOTOGRAPHY. THE ACTUAL METHODS OF AN EXPERT.** F. J. Mortimer. 88 pages, with many diagrams and illustrations, showing the treatment of different subjects. Price, 50 cents. Tennant & Ward, publishers, New York.

With the exception of a high-priced specialist book by the late Fitz Guerin,

this manual is the only text-book on flashlight work at present obtainable. Mr. Mortimer has given a good deal of attention to this specialty, and his book deals with the subject in a simple and thoroughly satisfactory way. The chapters deal with apparatus; different types of lamps, flashlight compounds, cartridges and powders, smoke preventers, backgrounds, reflectors, lenses, etc. Various classes of subjects and their proper illumination are dealt with, with the arrangement for lamp, camera, etc., and the making of portraits at home, silhouettes, fireside effects, church interiors, stage effects, street groups at night, animals, machinery and large interiors. Section III takes up the development and after-treatment of negatives made by flashlight. An Appendix deals with the quantities of magnesium required for various subjects, the making of flash powders, touch papers, flash sheets and miscellaneous hints.

ANDREW J. LLOYD

WE regret to announce that on Thursday, June 14, Mr. Andrew J. Lloyd, the senior member of the firm of Andrew J. Lloyd & Co., of Boston, passed away. Mr. Lloyd was born at Lockport, N. S., in 1848. When he was eighteen years old he came to Boston, and during the forty years that have since elapsed, was prominently identified with the business interests of this city. He was apprenticed to William Bond & Son and established himself in business in 1870. Though not a public inventor, he designed numerous mechanical methods now in use by the firm and introduced many optical instruments to the New England trade. Mr. Lloyd was a modest, unassuming gentleman, who greatly endeared himself to his friends by his cordial manner, and his business integrity was above reproach. He will, undoubtedly, be missed by his associates. He leaves a widow to mourn his loss. The business will be conducted as before by the surviving partners.

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Contributions relating to photography in any and all of its branches will receive our careful consideration. While not accepting responsibility for unsolicited contributions, we will endeavor to return them if not available, provided return postage is enclosed.

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E. B. SIDES  
BUFFALO CAMERA CLUB  
MISSION COURT



# PHOTO - ERA

The American Journal of Photography

VOL. XVII

AUGUST, 1906

No. 2



JNO. M. SCHRECK, BUFFALO CAMERA CLUB

SANDPIPER

## SOME BUFFALO CAMERA CLUB PICTURES

THOMAS HARRISON CUMMINGS

THE Buffalo, N. Y., Camera Club recently held its Fourth Annual Exhibition at its club rooms in that city, with great success, the sole avowed purpose of the club in making this public exhibit being to bring out the best work possible by enlisting the cooperation of the individual members. Their motto is "Men learn while they teach," and it is refreshing to note that they live up to this motto to the letter. After the close of one exhibition members begin to prepare for the next immediately, we are told, so great is their enthusiasm for picture-making. Such a club is necessarily something out of the ordinary, and such a spirit is sure to result in pictures that will make the rest of the world sit up and look. Although not affiliated with the Photo-Secession Movement, nor yet a member of the American Federation of Photographic Clubs, this club holds a unique position to-day between the two camps which divide the American photographic world. While following the injunction of St. Paul of "proving all things and holding fast to that which is good," they keep a middle course, because they believe firmly in the pictures they are making, in the cause they are working for, and in their



G EDWIN KELLER, BUFFALO CAMERA CLUB

FOG

ability to get results. They believe in working, not waiting; in boosting, not knocking; and in the genuine pleasure which they find in picture making. They believe in courtesy, kindness, generosity, good-cheer, friendship and in honest competition, while the appreciation and encouragement of the public would seem to be the main incentive that has brought this camera club thus far to its present high standard, so that their exhibition to-day is described by the public press to be quite an educational factor in the city of Buffalo. With a knowledge of these facts, we have taken the liberty of reproducing some of their pictures in this number in order that our readers may become familiar with their style of work. The collection does not, by any means, contain all the good pictures exhibited. These are shown as simply representative examples of what the average member had to place before the public for its judgment and enjoyment. "Evening on the Niagara," by O. C. Anthony; "Curious and Contented Sheep," by Edw. C. Avery; "The Restless Deep," by W. E. Bertling; "Fog" and "Among the Hills," by G. Edwin Keller; "The Laughing Boy," by Wm. H. Kunz; "Desert Land," by W. H. Porterfield; "Playtime" and "The Mission Court," by E. B. Sides, and "Nova Scotian Oxen," by S. S. Lloyd, are not beautiful or extraordinary, but simple subjects well chosen; pictures full of pictorial qualities, excellent in tone and in which the values of light and shade are extremely well rendered. We say they are not necessarily beautiful, because every one knows that there is no fixed standard by which one can judge abso-



G. EDWIN KELLER, BUFFALO CAMERA CLUB

AMONG THE HILLS

lutely regarding the beauty of a picture. Our tastes are so varied and our peculiarities so different and changeable that there can never be a final standard to which we can appeal. What an American likes may often be abhorrent to an Englishman or Japanese. It has been stated "that our ideas of beauty are founded largely on the principles of Greek art, where a beautiful whole — in the case of the figure — has been built up from units." The Greek ideal was almost entirely a physical one. Health was everything and physical defect an abomination; the Greeks were an outdoor people who loved the sun, and health and strength appealed to them especially. Thus, the strength and beauty of man struck them more, perhaps, than the beauty and grace of woman, and their sculptors delighted in Apollos rather than in Aphrodites. The Romans came nearer to our idea, and though they admired rugged strength in man, they admired beauty in woman more. So to-day there is a wide question on the subject of beauty, in figure and portrait studies. Even in landscape photographs there is as much discussion, oftentimes, as to where beauty lies. The picture that is full of soft charm, subtle atmosphere and clinging memories is often fiercely denounced by those who can only see beauty in a picture such as one might see by holding a mirror up in front of a picturesque scene in Nature.

But even here, it is in photography as it is in painting, — the mirror must be held up to Nature in such a way that the reflection is always true and pleasing,

for Nature has her moods, and at times she is quite fickle and even disappointing, but where there is discord, it must be eliminated by the photographer, and only the harmonies of Nature should be brought out in the photograph. Hence it is that we find this Buffalo exhibition interesting, because it is largely made up of a collection of harmonious pictorial photographs. In almost every case the idea expressed is good and the technical work is cleverly carried out. Though depicting commonplace subjects, it is evident that these workers delineated Nature by photography from a deeper motive than mere pastime. There seems to be beauty everywhere for them, — even in the most ordinary surroundings. The true lover of Nature always understands the voices of the woods and the fields, the sweet songs of the birds and the endless symphony of the wind in the pines. He conveys, through his photographs, the feelings, moods and the lights and shades of Nature in their true relationship with each other, subordinating detail to get breadth and beauty. The advantages of suppressing detail give these pictures a certain distinction of workmanship, and when carried to the extreme, as in the case of "Fog" and "Among the Hills," by G. E. Keller, there is a compensation of restful spaces and suggestion which leaves something to the imagination. In the "Mission Court" is a picture in which the artist has selected those conditions of light and surroundings which best harmonize with the sentiment which he intends to convey. We have here depicted the quietude and religious spirit of the old Spanish missions. It appeals at once to the imagination of the beholder, and this sentiment is perhaps the best excuse for the picture. It really expresses a portion of the artist's personality, as do also many of the other pictures reproduced in this set. This is shown in their apparent ability to manage light and shade in broad masses, whereby they get breadth and atmosphere in their pictures. The use of a large stop, also focusing on the immediate foreground or middle distance, and letting the rest merge off into a delightful softness, enables them to render their pictures in different planes, another very desirable quality in any picture. But it is in their skill in controlling development and printing with feeling or sentiment uppermost that results in artistic pictures, because it is here that one's knowledge of composition, perspective, light and shade, color values are called in play, and it is here that many failures are scored. By study and patience their skill has been rewarded; and, altogether, their work is of a high class, and can only do good in an artistic sense to all who see it.

## INDIVIDUALISM

E. O. HOPPE

**I**N the same way that the musician composing a sonata makes the music thereof accord with his idea of a high harmonious effect, so should the photographic artist aim to produce those impressions which he obtains from nature to express his ideas in a picture, using them to produce an harmonious whole.





EDWARD C. AVERY, BUFFALO CAMERA CLUB

CURIOUS AND CONTENTED SHEEP



CHARLES BOOZ

BUFFALO CAMERA CLUB

"O THOU GREAT SPIRIT HEAR MY PRAYER"

Not only in landscapes, but, going still farther from human nature, "the study of mankind is man."

The instrument of the photographer is the camera, but it must be remembered that it is only the instrument, and requires the master mind of the artist to grasp more than the mere realities which nature offers him. It is the manner in which he translates nature and how he uses the means at his disposal, limited, as they are, and causes them to bow to his sovereign will — there lies Art, and thus the artist gives his pictures his own individuality.

For figure work the everyday life supplies material in abundance in town or country, castle or cottage, in work or in sport; in short, wherever men and women live and labor. For successful work in this direction the pictorial photographer should take the painter for his example. He should recognize him as his master, who has gained experience before him; but avoid *copying* his work, as nothing is worse than imitation, especially in art. Let him be by all means original. His aim should be, before setting to actual photographic work, to study the subject into the smallest detail. There must be an intimate contact



WM. H. KUNZ

BUFFALO CAMERA CLUB  
THE LAUGHING BABY

between himself and the figures of his picture; he should, so to speak, feel with them. He must always study the different conditions, be with his subjects, and take a thorough interest in their characteristics. Only this will enable him to produce really good work. Was it ever known of an artist, poet or painter that he has given a true portrait of a nation without an intimate knowledge of their customs and peculiarities, their home life and their everyday existence?

An artistic figure study demands a good amount of observation and skilful overcoming of some difficulties. There must be severe self-criticism and the one set theme must be tried over and over again until the end seems to be reached. In this there must be no hurry, no "snap-shotting"; each pose must be thoroughly thought out. I mean "posing" in the right sense of the word. Each one ought to result in the desired effect; each subject included in the picture ought to be examined as to its artistic pictorial value. Of course, all this requires perseverance; but the end is a high and noble one and will give a high degree of satisfaction.

A word as to the size of the picture might be in place here. A work of art is not bound to a certain size and must not be judged by a system — say: 1-1 plate ( $6\frac{1}{2} \times 8\frac{1}{2}$ ), 10 x 12, or 20 x 30, etc. Whether large or small, square or oval, this must be purely a matter of taste and decided by the artist. Nobody can judge that a picture is not a work of art by reason of its small size or perhaps of its rectangular shape. The artist must rise superior to conventionalism. It must be entirely left to individual taste how he endeavors to bring his work to an effect. "Prescriptions" do not exist in art.

I think it is a great mistake to imitate "old masters" in photography. We live in days entirely different from theirs. We may understand the spirit which produced the pictures of the Middle Ages, but the surroundings do not suit the life of to-day. We have to deal with different conditions, and only there, where they will be taken into due consideration, will there be real health in art.

Some knowledge of drawing is a great help to the pictorialist. The student does well, before exposing, to make a few studies of his subject. It is a good plan to draw sketches, which in a broad way show the artistic pictorial effect.

There is not much to be said about the motive in figure work, whether of a realistic or idealistic tendency. It is true that the average of the public pays too little attention to figure studies as yet, especially when of a realistic kind, and not infrequently it does not even consider them worthy of notice. Many people give preference to a landscape of a sweetish character or to a foolish, fanciful pose. But these instances, where "beauty is the ideal of art," pass farther and farther away as time goes on. Why is the rural life of the farmer or the labor of working men and women not worthy to represent? Tolstoi says in his book: "What is Art? Not until man ceases to regard eating as a pleasure will he understand that its purpose is to sustain and nourish the body. So it is with Art. The true meaning of Art will dawn upon him when he looks beyond the mere portrayal of beauty."



JNO. M. SCHRECK  
BABY BIRDS KNOW THEIR OWN MOTHER

BUFFALO CAMERA CLUB

## A CONSIDERATION OF TANK DEVELOPMENT

DAVID GRAY ARCHIBALD

**A**FTER having experimented for some time with tank development, the case for and against it would appear to me to be about as follows. We must first leave out of consideration all pleasure obtained through development.

The theory of tank development is good and many photographers are progressively wondering whether it is not the better system. All dark-room work is not drudgery or to be dreaded. If you enjoy dark-room work, as I do when I have not too many plates to get out in a limited time, you will only be concerned with its being a better method. Results are the only things that count, desirable as it may be in the minds of some people to dispense with the dark room.

Writers on the subject take it for granted that you have knowledge on the very points you seek enlightenment on. They may be still struggling with the details which will yet come.

The greatest difficulty in the problem of development is knowing when development action should be stopped so that the plates' opacities may represent correctly the light values of the object photographed. Tank development does not do away with this difficulty.

There is nothing peculiar to tank development in the getting of a number of negatives taken of the same subject, but timed differently, that will yield ultimately the same kind of print.

Has it greater simplicity? may be asked. It is the fault of the man, not the system (of development), if he struggles with tray development. He need not experience any lack of ventilation, bad lighting or other physical discomforts, unless he wants to. Tank development as figured out is certainly not the solution of these problems. You have got to have some sort of a dark room to do a part of the work in. The question resolves itself into this: Can it be done as well thus as in trays, and if so, is it easier or more rapid, etc., than that method?

The tank development theory appeals strongly to those who have much work to turn out within a limited time. It cannot beat in quantity the amount of work done by a certain man who develops twelve plates at once in one tray and in five minutes. He uses the same tray to develop, fix and wash in. I understand he uses the Wallace system of development fully detailed in *Photo-Miniature* No. 56.

If plate manufacturers had got their product to the point where you could not use the tentative method of development—visual examination—you would have to come to this system, but they have not yet reached that stage.

A few of the three-color plate men use tank development, but it is a question if it is not a matter of personal liking, the same as one man uses one brand of plates in preference to another equally good.

If you know how and do it, any system of development will bring out all the latent image obtained in the exposure. The mode of procedure is identical with all systems, and visual examination is just as necessary as ever in tank develop-



W. E. BERTLING, BUFFALO CAMERA CLUB

ment. The time of development in tanks is usually more lengthy than with trays. The possibilities of all the plates being correctly developed, depends in both cases upon when you take them out. The same difficulty, the same need of ability to be able to judge when they are sufficiently developed, holds true in tank as well as in tray development. Here, as in all methods, you have got to think about their having acquired the proper density. To get right printing plates you must examine your negatives visually and remove each one to the fixing bath when it reaches the desired density. You must know when to stop, as no arbitrary time limit will do this work for you. You can only estimate the time of development when varying it for different purposes and plates and with different developers through experimenting along the old lines of visual examination.

Development tanks come for plates of all sizes and can be readily obtained of photographic stock dealers, but the plates are hard to handle in the putting of them into and the taking of them out of the grooves of most of the commercial boxes. They quite often go too far down for comfort and the grooves are unnecessarily narrow and close together. Of course, there are obvious ways of overcoming these troubles. Although stated so in advertisements, it is by no means fatal to good results to use an old fixing box for experimenting. Hypo is not so bad as all that. Many good workers use one tank for both developing and fixing and the washing of the plates as well. One of my friends, who does his tank developing in a nickel box, tells me he never has any trouble.

Formulas for tank development usually read about as follows: "For normal exposure, this bath will work in from one-half to three-quarters of an hour," or as much as to say, "If your exposures are mixed you had better watch them, or use the old tray method."

The man who thinks tank development, does not think in ounces. The amount of developer used in tank development is wasteful in some cases and for some purposes.

The formulas are all for the stainless developing agents, but you get your fingers stained all the same if you do much of it. To make up a bath for a commercial 8 x 10 box it takes about seven quarts of developer. And these boxes only hold 12 8 x 10 or 20 5 x 7 plates. If the developer is thrown out each time it is expensive working.

In regard to using too little solution to cover the plates well at the top, a friend of mine said, when I told him I had had this trouble (while experimenting with developing a number of plates in the same bath in succession), "The chump who would attempt tank development without sufficient solution to cover his plates should have either a nurse or a keeper."

The Eastman Kodak Company in its circular on tank development says that by diluting the developer by one-half water you can develop your plates in about twice the length of time it takes for the full strength developer to do its work. This is delightfully vague. As a matter of fact, it takes more than twice the length of time than is required for full strength solution. And this developing time increases enormously, not proportionally, on further dilution.



OSCAR C. ANTHONY, BUFFALO CAMERA CLUB

EVENING ON THE NIAGARA RIVER

The temperature given as proper (about 60 degrees) is not easy to maintain in working under common conditions. Alcohol, which is expensive, is sometimes recommended to be placed in the bath in hot weather to prevent frilling.

Some combine tank development with tray work by starting to develop their plates in trays and finishing them up in tanks. This is a needless complication. The plan advocated by some of moving the plates up and down and of reversing them top to bottom at intervals during development, to prevent streaks, etc., is more trouble in practice than the other way. Wet gelatine plates in alkaline solutions are difficult to handle without damaging and the fingers in the meantime are nicely soaked with the developer. All this sort of thing is a strong argument against tank development.

Provided as good work can be done this way as by the more usual method we may decide to use it anyway. You may believe that tank-developed negatives have a way of coming out more exactly as you want them every time, but wherein it gives us more certainty in regard to results has not been logically stated.

In conclusion, I might say that much that has been written about tank development is pure buncombe, as it requires as much, or more, intelligence and care as any other system of development.





E. B. SIDES, BUFFALO CAMERA CLUB

PLAYTIME

## FACTORIAL DEVELOPMENT CALCULATORS

H. C. TER MEER, E. E.

**I**N factorial development a device for the determination of the time of development from the time of appearance, without calculation, is of great service in the dark room.

In this article directions are given for making calculators for all developers ordinarily employed.

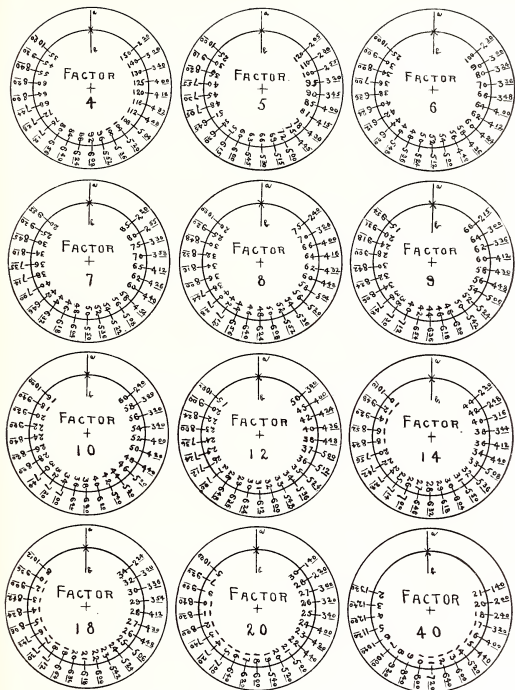
Cut out the large disk, on the outside line, also cut out the small disk, with a sharp penknife. Mount each disk on a piece of cardboard, of good quality, — playing cards are excellent; when dry, trim the outside of the two disks carefully (do not cut out the inner circle of the large mounted disk). For protection, each disk is given a coat of celluloid varnish, or a coat of paraffin wax. Now punch a hole through the exact center of each disk, insert an eyelet and expand the eyelet to such an extent that, although the disks are held together firmly, they can still be rotated freely. If desired, the disks may be fastened together by means of a bent pin or short piece of wire, but the ordinary McGill fastener, such as every business man has for fastening papers together, furnishes the quickest and simplest means.

To determine the time of development from the time of appearance, turn the inner disk — marked with time of appearance numbers, in seconds — until the arrow “a” points to the number representing the time of appearance in seconds; then the arrow “b” will point to the proper time of development, in minutes and seconds on the outer circle.

If a more pretentious calculator is desired, cut two disks of the desired diameter out of a thin sheet of aluminum and coat one surface of each disk with a very thin, uniform coat of wax, colored with some suitable pigment — to facilitate production of an even coating and also to render the marks that are to be etched on disk more readily visible. The wax is applied to the slightly heated disk by means of a piece of cloth. With a pair of dividers, lay off the divisions and write in the figures, by means of a fine pointed steel pen, held as usual, but used dry. Care should be observed that all marks and figures that are to appear on the calculator penetrate the wax entirely. When the laying out has been completed, etch with dilute hydrochloric acid, dilute sodium hydrate or potassium hydrate solution. When etched sufficiently, wipe off the wax and fill the marks with artist’s oil color — to render them more legible — rubbed in with the finger. When the disks are fastened together, as previously described, the calculator is ready for use.

### TABLE OF FACTORS

DEVELOPER	FACTOR
Adurol . . . . .	5
Amidol (2 grs. per oz.) . . . . .	18
Diogen . . . . .	12
Edinol . . . . .	20
Eikonogen . . . . .	9
Glycin . . . . .	7
Hydrochinon (usual strength) . . . . .	5
Imogen Sulphite . . . . .	6
Kachine . . . . .	10
Metol . . . . .	30
Metol-hydrochinon . . . . .	14
Ortol . . . . .	10
Pyrocatechine . . . . .	10
Pyro-Soda or Pyro-Potash . . . . .	
1 gr. Pyrogallol, no bromid	18
2 “ “ “	12
3 “ “ “	10
4 “ “ “	8
1 “ “ 1 gr. bromid	9
2 “ “ 1/2 “ “	5
4 “ “ 1 “ “	4
Rodinal . . . . .	40



FACTORIAL DEVELOPMENT CALCULATORS



H. H. BOYCE, BUFFALO CAMERA CLUB

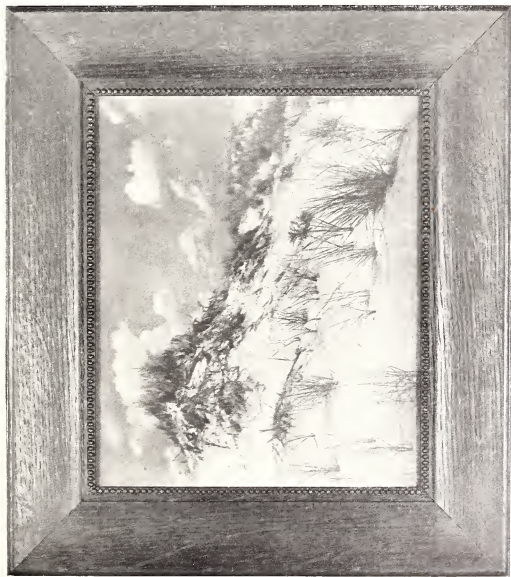
AFTER THE BALL

## OUTDOOR PORTRAITURE

THOMAS PERKINS, M.A. F. R. A. S.

**T**HE possessor of a well-equipped studio has many difficulties cleared away from his path that one not so fortunately situated has to contend with, if he wishes to take portraits. He is independent of weather, and, if he has electric lamps and a parabolic reflector, it matters not to him whether it be summer or winter, midday or evening, fine or cloudy. To the professional photographer, who is liable to be called on at all seasons, at all times and in all kinds of weather, a studio is a necessity. But there are many photographic amateurs, whose landscapes and architectural subjects can hold their own on the walls of any exhibition, who have no studio, but wish at times to take the portrait of a friend or, if they come across a good model, to make studies. To them two courses are open: namely, to work either in an ordinary room or in the open air. They will not be able to produce portraits of the same type that emanate from the professional's studio (to aim at such a type would be a mistake on their part); but they will be able to produce portraits that have distinctive qualities of their own, and which, on account of their greater naturalness and unconventionality, often please their sitters more than the professional's studio-made portraits.

Indoor portraiture has many pitfalls into which the unwary may, and often do, stumble; the side of the face farthest from the window will often be found insufficiently lighted, and if a reflector is introduced to lighten the deep shadow, the result is often double or false lighting on either side, with a shadow between running down the center of the face; again, the furniture and surroundings are apt to be obtrusive, and to distract the eye from the figure itself. This article is not intended to deal with portraits taken in ordinary rooms, but with those taken out-of-doors. These may be divided into two classes: (1) those in which an artificial background formed of screens or curtains is used, and (2) those taken amid natural surroundings. An artificial background is to be preferred



W. H. PORTERFIELD, BUFFALO CAMERA CLUB

DESERT LAND

when a "head and shoulders" or a "half length" portrait is to be taken, a natural background when a "full length" is desired.

We will begin with the former.

A corner between two walls at right angles to each other with open sky opposite to it can generally be found somewhere about the house or in the garden. If this corner faces the south, it can be used only on a cloudy day or in the early morning or late evening, for direct sunlight falling on the sitter is generally to be avoided; if, however, the corner faces the north, portraits may be taken even at noon on a sunny day, provided that no direct sunlight falls on the lens. The first thing is to provide a suitable background. Let two strong nails be driven into each of the walls about 7 or 8 ft. from the ground, and at a distance of about 6 or 7 ft. from each other; on either pair of nails a rod or length of iron gas-piping can be laid. A curtain of soft material, along the upper edge of which some rings have been sewn, can be hung from this rod. It is absolutely necessary to keep the background perfectly flat. This flatness may be secured by having two strings fastened to the bottom corners of the screen and tied to the rings of two 7-lb. weights, and by driving a vertical row of nails into the wall on either side of the curtain, about a foot from it, and tying strong pins bent into the form of hooks at the other end of strings fastened to each of the nails, the hooks can be passed through the curtain and will keep it tightly stretched. No portrait will be satisfactory if both sides of the face are equally lighted, for if they are, the portrait will lack roundness. For this reason the corner formed by the two walls is chosen. If the left side of the face is to be shaded, the sitter will be placed near the left-hand wall, and the camera placed facing the other wall; if the right cheek is to be in shade, then the sitter will be placed nearer the wall on the right-hand and the camera turned towards the left-hand wall. The depth of shadow may be regulated by putting the sitter nearer or farther from the wall that throws the shadow. If the top light is too strong, as it sometimes may be, a pole can be driven into the ground about 6 ft. from each of the two walls. Two laths fastened to the top of it at one end, and to the walls at the other, will form a square framework with the walls, over which an awning made of muslin can be stretched. If this is of a light blue color, the light passing through it will be restful to the eyes of the sitter. The color of the background is a matter of taste; if it is intended to vignette the portrait, the background must be light, but in most cases a darker one will be more pleasing. It may be here observed that if the background is light, a longer exposure will be needed; quite double of that required with a dark one. Personally, the background I generally use is a plush curtain of peacock blue; but there is no virtue in this special color, and I use it simply because a curtain of a convenient size that usually hangs over a door in the house to exclude draughts, happens to be of this color. A gray blanket will make a good medium-tinted background, while one of the usual color serves admirably when a light one is required. The sitter should be placed so as not to throw any shadow upon it, and sufficiently far in front of it to allow of the destruction of texture by the background being out of the plane of sharp



W. H. PORTERFIELD, BUFFALO CAMERA CLUB

A FOGGY MORN

definition. With regard to the lens, it may be stated that a "portrait lens" of the Petzval type is neither necessary nor desirable. This lens was indispensable in the old collodion days, when what we should now consider a slow plate, but which would then have been thought extremely rapid, had no existence. It was devised so that it would give sharp definition over a limited area, with an aperture of  $f. 4$ , in order to shorten exposure to the utmost; but all other good qualities of a lens were sacrificed in order to get rapidity. Now that a fully exposed negative may be obtained with a stop of  $f. 8$  or  $f. 11$ , when only an exposure of a small fraction of a second is given, there is no need to use a lens which will work at  $f. 4$ , but in most cases would be stopped down, so that its one special quality would not be called into use, while defects that have of necessity been allowed to remain, in order to gain rapidity, still exist in it.

A lens that with a full aperture of  $f. 8$  will give perfect definition all over a moderate-sized plate, of objects situated in one plane, is all that is needed. As far as length of exposure goes, a stop of  $f. 16$  might be employed, but it is better to use a larger aperture, because by doing so the depth of field is reduced, and the figure gains in emphasis by being better defined than objects in other planes. This especially is the case when natural backgrounds are used. An ideal lens for portraiture is therefore to be found in the modern flat-field anastigmatic combination. The older form, known as "rapid rectilinear," labored under the disadvantage of having a curved field, so that in the case of a standing

figure it was necessary to stop down perhaps to *f.* 16 before the feet, body and head could be brought at the same time into good focus, and thus the advantage of using a large aperture to give relief to the figure was lost. The use of a short-focus lens should be avoided, because, to get the head or figure a certain size, the camera has to be brought too near to the sitter for good effect, and the parts nearest to the lens will appear exaggerated in comparison with those more remote. A focal length not less than the diagonal of the plate is the shortest admissible; it is better that this minimum should be considerably exceeded, especially when large heads are taken. In this case the back combination of the doublet may well be used. If the largest aperture of the original lens is *f.* 8, the back combination will only work at *f.* 16; but as the absolute focal length is increased the depth of field will be decreased, and the portrait will not suffer from too great sharpness in the background, though, since large heads are usually taken with a plain background, this consideration rarely comes in. A long-focus landscape lens working at *f.* 11 is well suited for this work.

But besides photographs, such as those of which we have been speaking, in which plain backgrounds are used, very pleasing portraits may be taken with natural backgrounds, by which we do not mean brick or ivy-covered walls in which the joints of the masonry or sparkling lights reflected from the leaves distract the attention and irritate the eye, but portraits taken in a garden, in a woodland glade, in a leafy lane, on an open down, beneath cliffs or on the seashore, where the background is formed by what we may call landscape objects, thrown more or less out of focus so as to give the figure due prominence. In such photographs there is need of great care, so that the objects behind the figure do not fall into any awkward arrangements with it. It will not do, for instance, to have a tree trunk apparently growing out of the head of a figure, the horizon line running immediately behind the neck, or want of balance shown by having one side of the picture bare while the other is fully occupied. It is well to explore the country in one's immediate neighborhood for likely posing places — many such may generally be found — then when occasion requires, the sitter may be taken to one of these, and after having been duly posed, the exposure may be made. In such pictures as these it will generally be found best to include the whole of the figure. There is one difficulty which, unless it can be avoided, is apt to interfere with the result; I mean bright spots of light seen through foliage, which, when out of focus, are represented by small disks of white. These can sometimes be got rid of, or rendered so unobtrusive as not to matter, by local reduction of the negative, or can be spotted out on the print — an easy matter when it is made on platinum, bromide or other matt-surfaced paper; but it will be better, by shifting the position of the subject, to avoid them.

Pleasing pictures may be obtained by placing the person to be photographed at an open or closed door, going in or coming out in the former case, knocking or ringing the bell in the latter. If a lady has a graceful figure but a plain face, she may with advantage be placed with her hand on the bell knob or knocker, and photographed somewhat from the back; thus her beautiful figure will be





S. S. LLOYD  
BUFFALO CAMERA CLUB  
NOVA SCOTIAN OXEN



shown and her less beautiful face partly hidden. Such poses as these are somewhat unconventional,—a great advantage, as people soon grow tired of seeing the “usual thing” too often. One advantage of photographing figures out-of-doors, is that people are more likely to be at their ease, and so to assume a more natural pose than when they are having their portraits taken in a studio. The inclusion of an animal in a picture is often an advantage. Let a lady fond of dogs or cats be taken fondling one of these animals, and one fond of horses standing with her arm round a pony’s neck. A lady said to me lately, “How much more successful all the portraits you have taken of my daughter are when she has one of her dogs or her horse with her, than when you have taken her by herself. In these she looks so self-conscious; but when an animal is with her she is thinking of the animal, not of herself, and so you get a more natural expression.”

This article has so far only treated of the arrangements for posing and exposure, but the final result depends so much on the subsequent work in the dark-room that a few words about development will not be out of place. A negative free alike from hardness and flatness, and in which there is plenty of delicate gradation and detail, should be aimed at. It must not be over dense and the high lights must not be blocked up; hence a developer must be chosen that will enable such a negative to be made. There is nothing that will excel a pyro-soda developer made up as follows: Dissolve 1 oz. of metabisulphite of soda in about 8 oz. of hot rain-water, which has been kept boiling briskly for a quarter of an hour; and when cool, add an ounce of pyrogallic acid and then make up to 9 oz. by pouring into it some more of the cooled boiled water. Ten minims of this solution contain approximately 1 grain of pyro. This is the developer proper, the accelerator is simply 3 oz. of common washing soda dissolved in a pint of boiling water, similar to that used for the other solution. Ten minims of the pyro solution, 2 drams of the accelerator and 8 drams of water will make an ounce of normal developer. As the negative will be of a somewhat yellow, and therefore nonactinic color, development need not, in fact must not, be carried so far as when one of the developers giving a gray deposit is used. Hence better detail is preserved in the high lights.

Occasionally a rugged face may make a good picture. If the contrasts between the lights and shadows are greater, shorter exposure and a stronger developer and the introduction possibly of a few minims of a ten per cent solution of bromide of potassium will secure this result.

Not much need be said about printing; glossy paper is only suitable for fine, small, delicate work, or when process blocks are to be made from the prints. Smooth platinum paper is suitable for cabinet-sized prints and even for smaller ones. In large heads some diffusion is desirable, and if this has not been secured by the use of a single lens working at a large aperture, the print may be made with a sheet of thin clear glass placed between the film side of the negative and the printing paper. The paper in this case may well be of the rough or extra rough order.

## WHY SOME PERSONS REFUSE TO BE PHOTOGRAPHED

WILFRED A. FRENCH, PH. D.

**I**N the desire to present to the public a trustworthy likeness of a person of eminence, the publisher of a newspaper or periodical frequently discovers that no photograph exists of the subject of his sketch. An inquiry generally reveals the fact that the individual has a deep-rooted aversion to having his picture taken and no amount of persuasion will induce him to change his mind. We could, if inclined, mention the names of several estimable persons who emphatically decline to have their countenance perpetuated by photography. Of course, we do not here refer to the indiscriminate "snapshotting"—a practice indulged in by overzealous or unscrupulous camerists and now developed into a positive nuisance. I mean the dignified sitting made by appointment at the artist's studio or at the home of the model. While an objection might be urged against the excessive realism of the camera when in the hands of photographers without artistic ideals, it must be borne in mind that the average society woman and, especially, the theatrical profession, are emphatically opposed to the faithful portrayal of their form and features by the camera, insisting upon pictures in which the originally correct and artistic modeling had been carefully blotted out. In this case we have, instead of a normally shaped human face with familiar characteristics, a flat, white disk with eyes, nose and mouth, but entirely devoid of expression or significance. Public characters soliciting public approval by means of such really counterfeit presentments of themselves, scarcely realize how unfavorably pictures of this kind impress intelligent observers. Character and ability is what tells and not an artificially perfect face and figure. It is here that photography degenerates into a farce, obtaining little sympathy from serious-minded persons; and it is a pity that photographic portraiture of this class is much more in evidence than the truly artistic.

There is no doubt that the characterless photographic portraits, which fill the professional's show-cases as well as the average periodical, act as a deterrent upon the mind of every sensible person with artistic tastes. That the public at large is not as well acquainted, as it should be, with the highest artistic standard in portrait-photography, is, to a certain extent, its own fault. Every wide-awake person should know that photography has made extraordinary advance along artistic lines during the past ten years. It has not stood still, at least, while progress has been made in every science and industry. It is also plain to an intelligent community that a dozen cabinet photographs, costing only three dollars per dozen, can contain very little of the artistic element. A man producing pictures at such a relatively low price is not likely to possess an artistic soul; at least, he cannot afford to introduce much of his artistic individuality, if he have any. Then, too, unless adequately compensated, a photographer imbued with artistic temperament and ability to express it, cannot afford to carefully study and render a faithful account of the personality of the

sitter. Of late years it has become possible for high-class photographers, men thoroughly trained in art principles and technically well equipped, to obtain pecuniary compensation in proportion to the excellence of their productions. Fifteen or twenty-five dollars for the first print and five or ten dollars for every additional one is none too much for photographic portraits, which, by reason of their high artistic character, deserve to rank with the best of oil portraits. While the number of photographers capable of sympathetically interpreting the personality of the sitter, is, as yet, exceedingly small in proportion to the vast army of practitioners, several of the larger cities in this country, such as New York, Philadelphia, Chicago, Boston, St. Louis and Cincinnati, contain one or more of these veritable artists. Most of these masters of the camera have arrived at their present wonderful stage of proficiency only after a course of study and training in art principles, such as has not been surpassed in thoroughness and extent by some of our best painters. Besides, their method of managing the sitter is an improvement on the practices of the old-time "operating-room," by which term the photographic studio used to be designated. The memory of the apathetic, perfunctory manner of the photographer, his heartless use of the head-rest and other offensive devices, is sufficient to keep any sensitive person from again posing before the camera; unless, indeed, it is to yield to entreaties of the relative, who practices photography as an amusement. Yet, here, lack of ability and experience on the part of the novice result in portraits, the inartistic character of which fills the soul of the patient sitter with consternation. The consequence is another case of chronic dislike for the camera.

Photography, like other professions, contains within its ranks many practitioners, whom it is safe to avoid. Indeed, many a mother permits her daughter to sit to a photographer of notoriously bad reputation, whose establishment should be shunned by every respectable woman. Strangely enough, men eminent in business and politics are less particular in this respect, simply because they can there obtain a portrait, which, though lacking every artistic quality, is highly esteemed for the purpose of reproduction. After a disagreeable experience at the photographer's, *i. e.*, of the sort hinted at, some persons are prone to view every photographer with suspicion, condemning the entire profession because of a few delinquents. This is no more just than to denounce any other profession because of the sins of a few of its members. Besides, it is not necessary for a lady to patronize a photographic studio unaccompanied. High-class studios are, however, so conducted, that a lady may pose unattended for her photograph with the utmost safety and without the least detriment to her moral reputation.

## IN THE HARBOR

ISABELLA HOWE FISKE

THE sunset sky is an opaline shell  
Filled with the sound of the sea  
And the murmurs of earth that echoing, swell  
Singing to Deity.



MT. VESUVIUS FROM CASTELLAMMARE ONE WEEK BEFORE AND ALSO DURING THE ERUPTION

## THE RECENT ERUPTION OF MT. VESUVIUS

FREDERIC BULKELEY HYDE

(Illustrated by the Writer)

**I**N spring all Italy is fair. In the whole world no more beautiful region can be found than around the Vesuvian Bay — the Bay of Naples. Blue sky o'erhead, scarce bluer than the tranquil bay beneath. An ancient city rising on its hill commands this bay, while on its shores are towns and cities scattered far. Near by volcanic Ischia rests, and just across the bay fair Capri lies. The country round is green with gardens, vines and olive trees, and on the terraced hills above the orange and the lemon grow. The life is simple, and the simple folk pursue the even tenor of their way. Their needs are few; their wants are soon fulfilled; and laughing, chattering on their homeward way, at night you meet and pass these happy souls fresh from their toil. Yet near at hand, surveying this fair scene, a constant menace to their peace and happiness, a monster rears aloft his fiery head and sometimes belches forth great clouds of smoke by day and fire at night. For Mt. Vesuvius ever stands a terror to this land.

From ancient times Mt. Vesuvius was known as a semi-active volcano, and a geographer — Strabo — says: “. . . One might conclude from this that the mountain had once burned and possessed fiery abysses and had become extinguished when the material was spent.” In 63 A.D. an earthquake caused great damage to the thickly populated environs, and from that time until the first recorded eruption in 79 A.D., volcanic activity frequently manifested itself. The younger Pliny in his letters has given us a graphic description of the horrors of Pompeii's destruction and of near-by cities being consumed. From that time until 1631 Vesuvius seems to have remained in a quiescent state, when with a sudden roar, a great column of smoke was ejected, followed by seven great lava streams that devastated the towns of Torre Annunziata, Torre del Greco,

Bosco and others, killing, it is said, three thousand persons. In 1707, 1760 and 1767 eruptions occurred, but until 1779 no great damage is recorded. Early in 1779 the mountain commenced to pour out great streams of lava, and enormous rocks were ejected, accompanied by earthquake and rumblings, until in August of that year the climax was reached and eleven cones were in violent eruption, devastating the country at the base of the mountain. After a century of comparative silence a new period of activity commenced in 1871. Several streams of lava appeared on the north side of the mountain and flowed uninterruptedly for over a year. On April 26, 1872, a convulsion of the volcano opened a great fissure with such suddenness that twenty persons out of a crowd of spectators were burned to death 'ere they could escape the fiery torrent. From that time until the present only slight lava flows have occurred, and the mountain, while emitting steam and often smoke from the crater, has been comparatively quiet.

As early as September, 1905, a new crater was developed on the north side of the mountain, in a region known as the Atrio del Cavallo, and two large streams of lava continued to flow with varying intensity throughout the winter. In March a sudden activity of the central crater caused a flow of lava sufficient to destroy part of Cook & Sons' funicular railway that formerly carried tourists to the very edge of the crater. Professor Matteucci, the director of the Vesuvian observatory, whose great heroism during the recent eruption has evoked world-wide notice, went on record in the last days of March with the statement that "internal volcanic activity in the Vesuvian region appears daily to increase, and while no imminent danger is threatened, it is thought best to advise the authorities to be prepared for any emergency." But his words were scarcely noticed, and the people, entirely unwarned as to the possibilities of the situation, continued to till their fields and the tourists continued to flock up to the very rim of the crater.

Early in the evening of March 29, 1906, fitful spurts of fire or burning gases appeared issuing from the crater, and many strangers in Naples stood on balconies and sidewalks watching the first indications of an eruption, some of them little dreaming it was the commencement of the most spectacular convulsion of the volcano in modern times. Black jets of smoke were thrown out on April 1 to a height of 150 to 200 feet, and at night the glow of molten lava in the crater could be seen reflected in the slight column of smoke. At this time the crater was 350 feet in diameter and 4316 feet above sea level. On Wednesday, April 4, smoke was rising from the crater, completely filling it from rim to rim as it was ejected into air, at first only 300 feet, but in the early afternoon, as the violence increased, to a height of 750 feet. Alternately came gray and black smoke, the intervals of gray diminishing and the volume of black increasing. At 10.30 A.M. a sudden puff of gray smoke almost half-way down the south side of the cone, indicated the formation of a new crater that apparently grew in size as the volume of smoke became denser. By 5 P.M. the heavy black smoke from the main crater was ejected half a mile in



EARLY PART OF ERUPTION  
FROM BOSCO TRE CASE



CLIMAX OF ERUPTION  
FROM CASTELLAMMARE

air, and continuing to slowly ascend, reached an elevation of two miles. After dark a constant puff, puff of fire from the mountain showed even more clearly than the great smoke cloud that the volcano was in a state of increasing activity.

At 1 A.M., April 5, another crater had "blown out" on the side of the mountain, from which great quantities of molten lava were flowing, and by 3 A.M. the stream extended down the slope about a mile, being arrested for the time by the formation of a large pool that glowed and illuminated the whole mountain side. Great flashes of lightning played about the crater and rumblings as of distant thunder became frequent. At daylight the main crater was ejecting at intervals of three to five seconds enormous volumes of smoke, ashes, and some occasional rocks, to a height of 1200 to 1500 feet in air; and, as the wind blew the smoke to the west, a veil of ashes fell earthward like streams of rain. The rocks shot up with great velocity and fell back into the crater, over whose rim molten lava continually flowed down the sides of the cone. During the day the smoke and ash continued, and people arriving in Sorrento from Naples told of the ash being so thick as to require the use of an umbrella, and that the cab drivers and people in the street were blinded by cinders. At 6 P.M., April 5, a third crater appeared, and at once became by far the most violent of all. After dark it seemed as though a constant jet of incandescent lava was squirted from its mouth, very much as water pours from a broken pipe, and this stream, joining the other two, formed a great body of rapidly moving lava 1000 feet across, that moved toward Torre Annunziata and Pompeii at a rate

of 36 feet a minute, immediately threatening the town of Bosco Tre Case. Up to this time the sight was becoming rapidly more magnificent, but during the night rain set in and clouds obscured the scene.

On April 6 the clouds lifted once or twice, just enough to show the three small craters at work and the huge burning lava flow. Again during that night the lurid glow of the lava showed a vast stream like a glowing river down the mountain's gentle slope.

From Naples toward the city of Castellammare, directly south of Vesuvius, in following the shore, one passes through the towns of Portici, Torre del Greco and Torre Annunziata, while just back of Torre Annunziata, well up on the slope of the mountain, lies Bosco Tre Case, and in all four places on the morning of Saturday, April 7, pandemonium reigned. The lava was sweeping in five distinct streams, slowly eating its course through olive grove, garden and vineyard directly toward Bosco Tre Case — where a great offshoot of the stream entered, and slowly creeping along, drove the nearest people from their homes.

In Torre Annunziata and Bosco Tre Case the people were wildly gathering together their effects; processions of frenzied women and children marched the streets darkened by the falling ashes, and with disheveled hair prayed and chanted litanies to their patron saints, whose images they bore aloft. No happy laughter or joyful greeting there; instead the terror of impending destruction from the sky above and devastation by the advance agent of Death already creeping over their homes. Priests sought to comfort and calm the frenzied ones, but in vain; and churches were thrown open, through whose portals crowds surged to sanctuary within. That day throughout the Vesuvian plain voices of priest and people mingled, imploring Divine protection. Immediately back of Bosco Tre Case the ancient image of Santa Anna, the patron saint of the town, was borne on the shoulders of men directly to the advancing lava, and a miracle is said to have been performed as the lava stream halted in the presence of the saint. But all in vain, for by night part of the town lay engulfed in lava and even the church of Santa Anna was annihilated!

The military and civil authorities rose to the occasion. Four thousand soldiers of all branches were concentrated in Torre Annunziata, and the work of protection, relief and assistance at once proceeded. The artillerymen and sappers, with pick and shovel, were despatched that night to dig great trenches and throw up huge embankments in the hope it would turn the lava flow from destroying the Campo Santo or cemetery of the city. By almost superhuman effort they work, breastwork after breastwork being swept away by the advancing lava, ditch after ditch being filled and crossed, until at last the lava was at the very walls of the cemetery. And just halting it for an instant was a slight embankment thrown up hurriedly by the soldiers — but enough to hold it a moment — and then with a sputtering, it overflowed the tracks of the electric railway, and finding thus a point of least resistance, dashed off into the vineyards; and not only the cemetery, but the city was saved!





WOMEN AND CHILDREN BEARING THE IMAGE OF THEIR  
PATRON SAINT IN THE STREETS OF TORRE ANNUNZIATA  
AND IMPLOING DIVINE PROTECTION

A HOME AND HOUSEHOLD EFFECTS NEAR  
BOSCO TRE CASE, DESERTED ON THE  
MORNING OF THE GREAT ERUPTION





HAROLD MacGRATH

REFUGEES BY THE ROADSIDE

But what of the city? There soldiers filled great artillery forage wagons with household effects, beds, chairs and even chickens and ducks; the old and feeble, women and children — and drove at all speed for Naples or Castellammare to places of safety. So rapidly did this work progress that by Sunday afternoon fifty thousand people had been moved. Among the sights that brought home to the observer the great calamity none was more pitiful than to see a tiny donkey, led by a sorrowful man, drawing a little cart loaded heavy and high, from the top of which the face of a very old woman peered — going they knew not where, seeking safety first, and after that a new home! Æneas, bearing Anchises, was more than once met with on the road. These happy ones had been sorely afflicted; yet among all the dangers, loss of home and all, not one word of complaint, not one vituperative outburst; only the calm acceptance of the visitation and a confidence in Him who “governeth all things”!

From a spectacular point of view, the climax of the eruption was reached on Saturday night. The great crater, much enlarged, poured upwards a vast column of smoke, and ever and anon great sheets of flame shot half a mile in air, and the smoke cloud across the face of the mountain glowed with the reflection of fresh lava beneath. At each eruption — and they were continuous — great incandescent rocks and lava would be thrown high in air, and falling

would bound down the sides of the cone, at length resting on the mountain side — glowing points. As time passed, the great sheets of flame rose higher and higher until they extended a mile or more above the cone. Meanwhile, slight earthquake shocks and detonations from the mountain added to the horror. At 10.20 P.M. another and much larger crater opened near the Valle del Inferno, throwing out a huge boiling stream of molten lava that accomplished great destruction and which flowed five miles before it hardened. From that time until daylight it was a scene of infernal grandeur. The great flame from the crater burned a mile in air; the white-hot lava illuminated the entire mountain and reflected its ruddy glow in the clouds, smoke and water; and the constant flashes of lightning made the upper heavens brilliant as the jagged discharges shot down the rising smoke column into the great crater itself! The dull boom of explosions within the mountain carried terror to all who heard. At 12.20 A.M. a great earthquake shock was felt, followed in an hour by another; and then, with a crash heard for miles around, nine hundred feet of the cone fell into the crater, hurling out incandescent rock, fire and lava to a height of two miles in air! And then the fierce forces in the mountain were freed, and amid the horrors of the scene, it seemed as if Hell had broken loose on earth. The glare illumined sea and sky, nor did it diminish until broad daylight had come.

And on that memorable Sunday morning — April 8 — the mountain was concealed by smoke from burning lava; but far above, the reddish gray smoke hung like a huge mushroom, as the volcano poured upwards a constant stream of smoke that rose perpendicularly through a strong wind to an altitude of six miles above the sea. It rolled and churned over itself, causing an effect like a huge cauliflower head or the convolutions of the exposed human brain. Later in the day the view from Castellammare was magnificent and of the mountain and devastated country most comprehensive. All roads were filled with a continuous procession of artillery wagons bearing refugees. Many had already escaped by covering their heads with inverted tables, chairs, and even as Pliny describes in his letters, with pillows tied on their heads. Many who abandoned their houses uncovered were stricken to earth by rocks and lapilli, and were forever buried beneath the ash. The day was warm and the sun shone clear. The smoke from the lava concealed Naples and some nearer towns from view. Away to the east the rising smoke indicated that which could not be seen — a vast lava stream flowing — while nearer at hand six large streams branched out like great fingers, holding in their grasp the fertile fields below. Occasionally a sudden puff of smoke at the head of the moving lava indicated the destruction of another house and bright flames confirmed its end. From the diameter of the smoke column, rising with incredible rapidity, one could see the vast extent of the newly formed crater, and often, as the white clouds drifted by and were caught by the upward suction, they would spread over the smoke like a fairy gossamer. Towards the west the sun shone clear; towards the east the country was hidden in darkness and smoke, while keen flashes of

lightning illuminated the infra-canopy space. The edges of this smoke canopy toward the west, tinted a dull brick red by the sun, kept rolling over and over on themselves, forming a great shell-like structure into which enormous quantities of smoke and ash were momentarily ejected by the raging volcano.

As night approached the darkness under this great canopy became intense and the last rays of the setting sun caught the little drifting clouds below, throwing them a clear pink against the brick red above. It was a scene of stupendous grandeur. During the night the mountain became much less active and the lava stopped; but as the lava ceased the ash thrown out of the crater was carried for miles in air — and fair Naples received her visitation. On Monday so thick was the cloud of ash on the city and harbor that boats could not leave or enter the port, and it was only on Tuesday, when the wind shifted, that many imprisoned vessels fled.

Amid all this terror, the king and queen, having arrived from Rome by train, were in the midst of their beloved people bringing assistance and cheer. The king, not content with issuing orders, saw to it that they were carried out; and where there was most danger and desolation, he was in the midst of it — a noble example of devotion to his people.

Even when reports showed the diminution of violence, a sudden outburst of the mountain buried the towns of San Giuseppe and Ottajano in many feet of ash and lapilli, killing 250 persons and injuring many others. The ash in Naples reached the great depth of ten inches, causing the market of Montecaliveto to collapse, killing a score of persons, and made Naples to resemble an exhumed city of the past. But the force had been spent, and the mountain smoldered.

Yes, the eruption was over; the ruin had been accomplished, and human lives had been snuffed out. And high on the mountain side, close under the seething crater, throughout all the reign of terror below and great danger above, an heroic observer, with his assistants, remained at his post. He noted every phase of the activity, and as missiles penetrated the roof and destroyed his delicate apparatus, he sent out by telegraph words of cheer and hope to those below, thinking only of his work and duty. And when it was possible to reach the observatory, the first to enter was the king's aide, ordered to decorate this man with the highest honor in all Italy; but Matteucci, with his characteristic modesty, returned the decoration with the reply, "As a scientific observer I have studied these volcanic phenomena under wonderful conditions — let that be my sole reward."

Vesuvius is resting. But who can say when he will again rise in awful majesty — from passive mountain to fiery volcano — and hurl death and destruction to the lands at his feet? Next year, as of yore, the country round will be green with gardens, vines and olive-trees; the simple folk will till the soil — their needs are few, their wants are soon fulfilled; and laughing, chattering on their homeward way at night you'll meet and pass these happy souls fresh from their toil — for now Vesuvius sleeps!



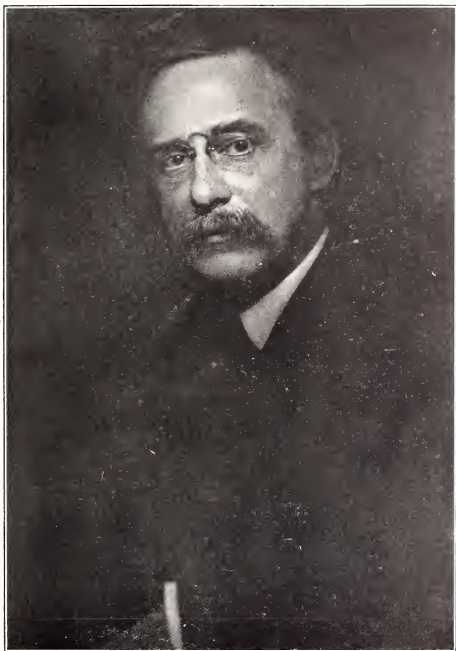
LAVA STREAM ARRESTED AT THE CEMETERY, TORRE ANNUNZIATA    REMAINS OF A CHURCH AT BOSCO TRE CASE  
REMAINS OF A CHURCH AT TORRE ANNUNZIATA    A COOLED LAVA STREAM NEAR TORRE ANNUNZIATA

## CHARLES WESLEY HEARN

(President of National Photographers' Association of America)

**C**HARLES W. HEARN, the present executive of the National Photographers' Association of America, was born in Portland, Me., May 10, 1853. He was educated in that city, graduated from the Portland High School in 1870 and learned his trade as a photographic printer at the studio of J. H. Lamson of Portland, Me., well known throughout New England as an artist of high standing in the profession. Under the careful guidance of Mr. Lamson he soon became proficient as a printer, and in March, 1873, he entered the employ of Mr. Frank Jewell of Scranton, Pa., where he remained only a short time, and in the spring of 1874 entered the employ of Mr. F. Gutekunst of Philadelphia. Between leaving Scranton and entering the employ of Mr. Gutekunst, he wrote his now well-known book, "The Practical Printer," which was published by Edward L. Wilson in July, 1874, and has since passed through several editions. It became the text-book of the country for albumen and plain paper printing and was translated into several foreign languages. In January, 1876, he bought the printing establishment of *The Philadelphia Photographer*. During the Centennial Exposition, he had the contract from the Centennial Photograph Co., and printed many thousands of pictures, using from 1½ to 2 reams of albumen paper each day. When it is considered that twelve prints were made from a single sheet, the possibility of a ream of paper extended up into the thousands. During this year he married the younger daughter of Dr. J. F. Bird of Philadelphia, by whom he has had two children, a son, Mr. Frank Hearn, at present a photographer for Mr. George V. Buck of Washington, D. C., and a daughter Adelaide, a kindergarten teacher in the public schools of Boston. In March, 1878, he went to Chicago as a printer and to learn operating and worked with the late Henry Rocher, who had a world-wide reputation as an artist photographer. In 1879 he returned to Portland and entered the employ of Hon. M. F. King, Ex-Mayor of Portland and photographer of that city, and later purchased the business of Mr. J. M. Peck, which he continued there for ten years. In 1889 he came to Boston, and after working for Mr. E. N. Hardy, established himself in business on Boylston St. in 1891, where he has continued ever since. In February of this year he moved to his present location, 164 Tremont St., where he is now established, doing a profitable business. In 1900 he was elected first vice-president of the Photographers' Association of New England, and subsequently was elected as its president in 1902. He was elected first vice-president of the Photographers' Association of America in 1904, and last year was elected president of this association, which office he now holds with considerable distinction.

The services which he has rendered to the profession, both in his private and public capacity, have been of great and lasting good. The honors which have come to him in recognition of these services have been justly deserved.



CHARLES WESLEY HEARN  
PRESIDENT OF THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA  
PORTRAIT BY MORRIS BURKE PARKINSON





1 BENJAMIN. CINCINNATI, OHIO  
PORTRAIT







C. J. VAN DEVENTER, DECATUR, ILLINOIS  
PORTRAIT





J. C. STRAUSS, ST. LOUIS, MISSOURI  
SIDNEY ALLEN





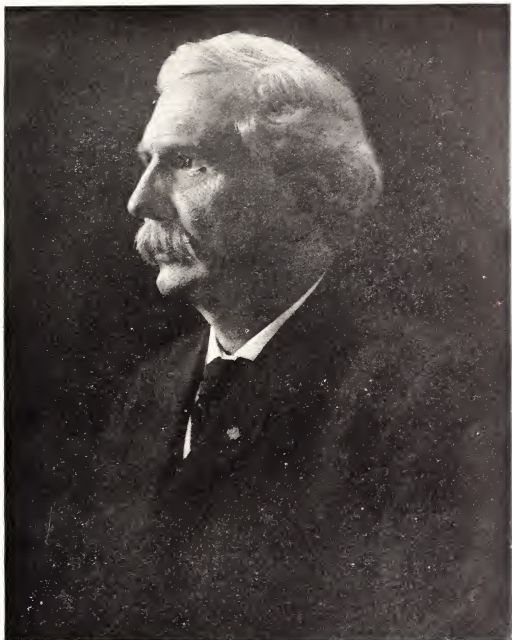
GEORGE G. HOLLOWAY, TERRE HAUTE, INDIANA  
PORTRAIT





DUDLEY HOYT, ROCHESTER, NEW YORK  
PORTRAIT





MARY CARNELL, PHILADELPHIA, PENNSYLVANIA  
HON. O. W. CUTLER, MAYOR OF NIAGARA FALLS





F. A. RINEHART, OMAHA, NEBRASKA  
PORTRAIT





JOHN GARO, BOSTON, MASS.  
PORTRAIT



## A PHOTO-ERA TOUR IN EUROPE

(Continued)

BOLOGNA, FLORENCE, PISA AND GENOA

WILFRED A. FRENCH, PH. D.

IT was by no means easy to leave Venice, with its wealth of historic associations, but then, our next objective point was *la bella Firenze*. Besides, an incident occurred, which forced upon us the alternative of quitting Venice abruptly. It was a snow-storm, as severe as it was unexpected. The natives were not a little astonished, for such a manifestation of winter-weather is an extreme rarity here. The younger generation viewed the snow, as it was being shoveled from *piazze* and *fondamente* with open-eyed wonder, for to them it was a natural curiosity. It was a novel sensation to stand on the Iron Bridge (*Il Ponte dell' Accademia*), opposite the *Accademia*, and look off towards *Santa Maria Della Salute*, that stately edifice and the neighboring buildings decked in a heavy covering of virgin snow.

At ten o'clock that morning we began our tedious eight-hour journey to Florence. As the train halted at Ferrara, some of us were seized by a desire to pass a few hours in the city of Tasso and Ariosto, but it was not to be. At 2.45 P.M. we reached Bologna. Here the two principal railway lines of Italy intersect, causing much unnecessary annoyance and confusion to tourists. The memory of an unpleasant experience caused by a seemingly interminable wait, on a previous passage through the old city of the Guelphs, coupled with the fact, that one of the world's greatest pictures may be seen here, triumphed over our original intention to journey directly to Florence. Descending, therefore, from the train and consigning our hand-baggage to the porter of our hotel, — *and seeing it deposited in the coach* — we walked without delay to the *Accademia di Belle Arti*, only a short distance away. It was three o'clock and the light good, so we hurried to inspect the *pièce de résistance* of this excellent art-gallery — Raphael's St. Cecilia. We had seen at Dresden an admirable copy of this picture — mistaken by so many tourists for the original — but we were not prepared for such beauty of coloring as was exhibited here and, above all, the expression of rapture of the saint, as she raises the eyes to the angels in the clouds above, apparently listening to the heavenly song. We were very much interested in a collection of copies of this particular St. Cecilia, exhibited in a room set aside for this purpose. These consisted of paintings, pastels, water-colors, engravings, etchings and photographs, all admirably interpreted by artists of great ability. It was plain to all of us that each effort had failed to reproduce that degree of ecstatic expression in the face of St. Cecilia, so wonderfully depicted in the original painting by the immortal Raphael. We did not fail to enjoy, too, the superb examples of Francesco Raibolini (*Il Francia*) and Guido Reni, for which this gallery is noted.

After leaving Bologna, we passed through country that had little charm for the eye, but after we had passed Pracchia, the landscape began to be attractive, for we were now in the region of the Tuscan Apennines. A few miles





WILFRED A. FRENCH. FLORENCE FROM BOBOLI GARDEN  
THE DUOMO AND CAMPANILE IN DISTANCE  
FLORENCE, IL PONTE VECCHIO





GENOA, THE CAMPO SANTO

beyond Piteccio, we obtained a superb view of the beautiful plains of Tuscany, far below us lying Pistoja, which city we reached after a descent from mountainous heights. Soon we were at the foot of the Apennines and, passing through charming villas, quickly reached the far-famed valley of the Arno, an appropriate setting for so precious a gem—*la bellissima Firenze*. What remains there to say of Italy's fairest daughter? Have not her praises been sung by the bards and writers of every land? Have not Italia's illustrious poets since Boccaccio penned volumes in admiration of her charms? What inexhaustible sources of inspiration await the poet, the painter and the architect! A city immortalized by a Dante and a Savonarola and glorified by such artists as Giotto, Fra Angelico, Michelangelo and Ghiberti. A city blessed and cursed in turn by the Medici—her good and bad angels. Rich, beyond compare, in treasures of art and prestige, it attracts hosts of tourists and students, thirsting to drink at the most celebrated source of art in Europe. No city in all history can boast of such a galaxy of great men, whose ashes repose in *Santa Croce*, the Pantheon of Italy. In strolling through the city, every stone of which is sacred, we seem to feel the very presence of the great souls that labored and suffered for the glory of Florence. The creations of their distinguished architects are not crumbling ruins; they are solid and well constructed, seemingly built for all time. Beyond the walls, when, on a clear day, we look from the summit of a hill across the sweet valley of the Arno, how much ravishing beauty is revealed! From the heights of *Bello-*

*sguardo*, for instance, the view is so comprehensive, as to completely fill the eye, which, at last, is able to single out each conspicuous object from its fellows. We note in succession *Santa Maria Novella*, *San Frediano*, *San Lorenzo* (Medici Chapel), the *Duomo*, the *Campanile* (Tower of Giotto), *Santa Maria del Carmine*, *Or San Michele*, *La Badia*, *Il Bargello* (*Palazzo del Podestà*), *Santo Spirito*, *Palazzo Vecchio*, *Santa Croce*, *Palazzo Pitti*, Hill of *San Miniato*, *San Miniato al Monte* and, behind *S. M. Novella*, the tower-crowned heights of Fiesole — these and many other objects of interest, all glowing in a landscape of surpassing loveliness steeped in the richest light. Truly, an inspiring sight and one a grateful memory would fain recall perpetually. Any one familiar with the wealth of opportunities for the student of art, science, music, literature and history presented by this Tuscan Athens, will comprehend the magnitude of the task we had undertaken in the short span of twelve days. Prepared to appreciate with a fair degree of understanding the significance and value of the numerous objects of interest, without and within, and with proper regard for our powers of endurance, we absorbed a prodigious amount of information — a source of perpetual joy and comfort in after years. In view of the numerous excellent works by modern writers, whose names are legion, it were folly to attempt to enumerate here the multitudinous places of interest which fascinate the intelligent traveler, or even to chronicle individual impressions, however delightful. Free of adventure, our sojourn — a foretaste of a much longer visit to be enjoyed in the near future — resolved itself into a steady progression of outings, pleasantly diversified with music — grand opera at the *Niccolini* and the *Pergola* while we did not neglect to carefully observe the laws of health and repose. While omnivorous sight-seers — fellow travelers from the Pennsylvania, and seemingly endowed with an unlimited mental capacity — pushed on to Rome and Naples, we had almost reached the point of satiety, and decided to reserve the remainder of our appetite for an entire change of scene — the Riviera, Paris and the Netherlands. One of our memorable experiences was an excursion to *La Certosa*, the oldtime Carthusian monastery, romantically situated in the valley of the Ema and easily reached by trolley-car. The venerable cloister is still occupied by members of the order, who conduct a thriving business in the manufacture and sale of choice aromatic cordials. The monks prepare these famous liqueurs according to the original formula, which has been carefully and successfully guarded for centuries. The brethren were very cordial, though not spirited, and conducted us with manifest pleasure through chapel, cloister and cell, also aiding us in our photographic essays. The oldest of the group, Fra Giuseppe, considerably past eighty, then led the way with surprising agility to the old well, in the center of the cloister-yard, mounted the highest step and posed for his photograph.

We terminated our three weeks' stay in the capital of Tuscany with an ascent to Fiesole. The square in front of the old church of *Sant' Alessandro* affords a magnificent panorama of the valley of Florence. We enjoyed this glorious scene from an ancient stone seat, bearing the chiseled inscription, "*Ai suoi*

*fratelli viaggiatori di tutti i Paesi*," a permanent token of admiration from an enthusiastic Englishman, signing himself simply "*Un inglese*, A.D. 1872." On the eve of our departure from this fair city of the Renaissance, we were apprised of the death of a traveling-acquaintance at Rome of typhoid fever, contracted from eating lettuce rinsed in impure water. Knowing the danger accompanying the consumption of lettuce in certain parts of Europe, we habitually excluded this delicacy from our bills-of-fare, likewise avoiding the use of drinking-water, except in cases where it is regarded as absolutely safe. Ordinarily, we made a selection from the many excellent spring-waters in bottles, with which every first-class hotel or restaurant in Europe is supplied.

We were surprised to find Pisa such a clean and beautiful city. The remarkable group of buildings on the *Piazza del Duomo*, familiar to every person throughout the civilized world, through photographic representations, greeted us with a smile of recognition. We enjoyed the sensation of walking up and down in ascending the *Inclined Tower*; admired the superb paintings in the Cathedral, and were enchanted with the echo in the Baptistery, which repeats in blended unison the separate notes of a chord. The near-by *Campo Santo* caused no thrilling sensations, its contents of ill-assorted tombs, sculptures, frescoes and curiosities impressing us as stupid. Not so, however, the dainty marble chapel of *Santa Maria della Spina*, on the left bank of the Arno, which, in all truth, is an architectural gem. Our departure from Pisa, where we had passed a day most profitably, marked the close of our journey in *All' Italia*, and the following morning found us *en route* to Genoa. After quitting Spezia, the railway runs along the famous *Riviera di Levante*, on the coast east of Genoa, which, in strikingly beautiful scenery, surpasses the *Riviera di Ponente*, extending west of Genoa. At Chiavari begins a series of tunnels, some of which are of considerable length, and occasional glimpses of the sea with its iridescent coloring, backed by the promontory of Portofino, proved most tantalizing, taxing our patience almost to the breaking-point. At last the train emerged into the open for a precious five minutes, during which interval our eyes fairly devoured a vision of surpassing beauty — the little coast-town and famous winter-resort of Santa Margherita. Still another tunnel, and the train entered Rapallo, leaving which and rounding the village of San Michele, we had lovely Santa Margherita right before us, gaining an admirable idea of its charming situation. Another moment and the train plunged into the long tunnel which penetrates the promontory of Portofino. Emerging at Camogli, we were favored with a refreshing prospect upon the Mediterranean with its ever-changing hues. The numerous tunnels, which now followed, sadly interfered with the view and vividly reminded us of a similar experience on the St. Gotthard road, several weeks before. However, we observed enough of the scenery along this beautiful shore to appreciate the reputation it enjoys as an irresistible attraction to visitors fleeing from the northern winters. We reached Genoa at 2.15 P.M., making the run from Pisa in five and one-half hours, which, barring the annoying, but unavoidable, interruptions of the view, would have seemed short.



ANDREA D'AGNOLO  
ST. CATHERINE  
CATHEDRAL OF PISA



Genoa fully deserves the title of "La Superba," for its situation is not surpassed by any sea-port in the world, Naples and Constantinople not excepted. Unlike most maritime cities in Europe, Genoa has maintained the commercial eminence gained during the earliest times, and this in spite of its naval defeat by Venice over five centuries ago. From an art view-point, Genoa deserves not to be slighted, offering, as it does, much valuable material to the student and connoisseur. There are many Americans, whose visit here has been suggested or encouraged by Mark Twain's exhilarating narrative, "Innocence Abroad." Times have changed considerably since that famous book was written and our experience here was quite barren of excitement or adventure. We strolled through the great palaces filled with splendid pictures; gazed with admiration upon Paganini's Guarnerius violin; enthused over the mosaic portraits of Columbus and Marco Polo and mused over the belated enthusiasm of the Genoese over the Great Discoverer, who, turned down and ridiculed by his own countrymen, obtained practical aid from a Spanish court. Nevertheless, the noble statue of the distinguished navigator, in the *Piazza Acquaverde*, excels any monument erected by the Spaniards in his honor. From the uppermost gallery of the dome of *Santa Maria di Carignano*, crowning the summit of the principal hill of the city proper, we obtained a stupendous panorama of the city, harbor and fortifications, the amphitheatre of fort-crowned mountains, the *Riviera di Levante* and the *Riviera di Ponente*, and the vast, ever-varying expanse of the Mediterranean. The *Campo Santo*, situated a few miles beyond the city's limits on the slope of a hill, is constructed on a grand scale and presents an imposing appearance. Architecturally considered, it is easily the finest cemetery in the world. The whole vast structure is built of white Carrara marble and consists of a series of galleries, in the recesses of which repose the remains of the rich. The large number of magnificent tombs, ornamented with marble statues of elaborate design — the work of Italy's foremost artists — appealed successfully to our artistic sense, and, incidentally, could be viewed as evidence of the wealth of the prosperous Genoese.

(To be continued)



POND LILIES

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## EDITORIAL DEPARTMENT

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### AUGUST

I love the crimson clover and the fields of waving corn;  
The quiet, balmy evening, and the fragrant, dewy morn;  
The pink and snowy blossoms hanging on the apple trees;  
The chirping of the crickets and the humming of the bees.  
I love the summer's honey breath, the blushing buds of May;  
The teeming autumn, rich with fruit, the scent of new-mown hay;  
The noisy babble of the brook and laughter of the rill;  
The lowing herds upon the heath and flocks upon the hill.

### MIDSUMMER

**I**T is midsummer, when the season runs to splendid riot of color and bloom. The ripe grass has fallen under the clatter of the mower and the barns are fragrant with new-mown hay. The air throbs with tropic heat and the sultry days of August have come at last. We turn instinctively to the lakes and rivers and the changing sea. Vacation days are not in vain if one draws health and strength and happiness from these experiences.

### FISHING

**F**ISHING has always been an inspiring subject for many wise philosophers. The lone fisherman sitting upon a rock and lost in contemplation of the point of his rod is a familiar and interesting figure at this season of the year. We have always thought that the chief charm of fishing was its delightful uncertainty. If we always knew before hand what luck we are to have fishing would be without interest. It is a picture of life. If we always knew what life had in store for us in the future, there would be no fun in living. It is because we can speculate, both in fishing as well as in life, as to what luck we are to have, that makes both worth the living and having. When the poet-angler sings,

“Do you think it odd,  
With my old fly rod,  
That I long to go a-fishing?  
O! My heart is sick with wishing, —  
Wishing for the next vacation,  
Health, and rest, and recreation,  
With my old fly rod.”

We heed the cry, and the lure of the wild is upon us. The camerist takes his fishing rod and the fisherman takes his camera and both are off for the little rivers to dream their lives away.

## NATIONAL CONVENTION

THE 26th annual convention of the Photographer's Association of America will take place at Niagara Falls, N. Y., August 7-10 inclusive. Interesting plans have been made by the executive committee and an excellent program is announced on the lines of the new policy adopted by the board. This year the convention will prove its position as a responsible and dignified body in the photographic world. The lectures and business talks will be by practical business men and will take precedence, it is stated, of every other consideration. The art side of the convention will be confined to one address and the picture show, which is promised to be the finest and most carefully selected exhibit of pictures from American professional photographers, that has ever been exhibited by this association. A salon exhibit of twenty-five pictures will be selected by a jury of professional photographers, which will represent the American standard of professional excellence for 1906. In addition to the salon feature, there will be a special loan exhibit from the American Federation of Photographic Clubs, consisting of 150 foreign and 200 American pictures. Mr. E. S. Curtis, of Seattle, the photographic historian of the American Indian, has kindly contributed a set of his famous Indian pictures for the loan exhibit. With all these attractions, it is hoped that the attendance will be larger than ever before. A letter sent to F. R. Barrows, Treasurer, 1873 Dorchester Ave., Boston, Mass., will give all the particulars necessary for attending the Convention.

## REMBRANDT

ON July 15 of this year, Holland celebrated the tri-centennial of the birth of Rembrandt, one of the most illustrious artists of modern times, and sometimes called the patron saint of the photographer. Many an amateur and professional, after seeing Rembrandt's love for light and shade in his pictures, will always take an exquisite delight in the value of light and shade even in the most ordinary and commonplace surroundings. Rembrandt produced very remarkable effects by his concentration of light, making strong, but soft contrasts of high lights and deep shadows. His work is remarkable for its wide range of subject, poetic fancy and his great creative power. No less than 1610 works by Rembrandt are preserved to this day, 450 paintings, 260 etchings, 900 drawings and sketches. Rembrandt was born at Leyden, Holland, in 1606. At the age of twelve, his natural inclinations drew him on to the art of painting and design. At seventeen, he began to observe for himself landscapes and outdoor aspects, men and women. He drew with the pencil and pen, etched and engraved and painted, portraits and pictures alike. He died in Leyden in 1669, and since his time, there are no pictures that grow upon one like those of Rembrandt. Their simplicity is noticeable. They show great repose, because the touch of the artist in them is clear and strong, showing well-balanced divisions of space. They form an excellent study for composition, lighting and abstract line for the photographer and art student.



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## THE ROUND ROBIN GUILD

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*Conducted by Elizabeth Flint Wade. Specially designed for the amateur photographer and the beginner. Membership may be obtained by sending name and address to the PHOTO-ERA.*

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"THERE is no month in the whole year," said Dickens, "in which Nature wears a more beautiful appearance than in the month of August. It comes when we remember nothing but clear skies, green fields and sweet-smelling flowers. A mellow softness seems to hang over the whole earth; the influence of the season seems to extend to the very wagon, whose slow motion across the well-reaped field is perceptible only to the eye, but strikes with no harsh sound upon the ear.

"The month was made for laziness, and lying on one's back in green places and staring at the sky till its brightness forces one to shut one's eyes and go to sleep."

This delightful month, the midsummer of the year, is once more our guest; but even so, with all its soft allurements, with its *dolce far niente* promptings, we must not give ourselves up too entirely to its beguilements.

The glad fruition of the year is at hand; soon we must hasten back to desk and to shop, to school and to warehouse, and it behooves us not to waste all the days of August "lying on one's back in green places," but to spend some time in making for the Historic Guild some photographic record of a swiftly passing landmark.

Not very long ago a certain collection of battle flags was desired, that they might be carried in a patriotic procession. But alas, so fragile had these precious trophies become that to carry them for any distance meant their total destruction. Now, what do you think is the result of this sad discovery? Each one of these flags is being carefully unfolded and photographed, so that when at last the destroying finger of time has crumbled them, we shall at least have their semblance.

Would it not be a splendid plan for those who are in touch with historical societies to photograph such flags as are in their possession and write their history on the back of the mount? Battle flags are so fragile and at the best can last only a limited number of years. Let the members of our Guild help to preserve them in the only way they can be preserved, — in a good photograph.

### SPECIALIZING ONE'S WORK

"EVERY library," says Dr. Oliver W. Holmes, "should try to be complete on at least one subject, if it is only that of pin-heads."

Our interpretation of this saying is that no matter how much one may dabble in other things, he should have at least one thing which he can do well, or one subject on which he is an authority, and all other things should be subordinate to it, and pursued merely as a recreation.

There is an application of this rule to the pursuit of photography. Though one may make pictures of anything that comes within the scope of his lens, he should have one special subject — be it portraits, landscapes, marines, still life, architecture, or any of the many in which he is specially interested — and make himself a master — as near as one can be a master in these strenuous days — in studies of this one subject.

Then will one have something "worth while" to show for all his expenditure of valuable time, material and nervous wear and tear.

As a rule, the purse of the amateur is far shorter than his ambitions, and perfecting himself in the making of one kind of pictures will become in time a source of income.



FIRST PRIZE

MRS. CHARLES S. HAYDEN

An amateur became much interested in the water-craft which found harbor in the seaport in which he lived. It occurred to him to make photographs of strange or odd-looking crafts as they sailed into port from time to time. As a result he became an expert in photographing water-craft, and before he realized it he had a fine collection of unusual and uncommon sea-vessels.

It is a very common and a very true saying that "one thing leads to another." It was exemplified in the case of this

amateur, for a dealer, hearing about his pictures, came to see them, paid him a liberal price for many of them and gave him orders for more. Spurred on by his success, he is doing even better work, and his fame is beginning to spread beyond the little port he calls home.

Two young women living on the Pacific coast began photographing specimens of the rare and beautiful flowers found in their vicinity, and have carried their art to such perfection that they are leaders in this special branch of pho-



THIRD PRIZE

PAUL R. MORRISON

tography. Their work is very artistic and finds a ready sale wherever it is shown.

Another amateur has made cats a special subject for the camera, and Grimalkins young and old, frisky and staid, pose before the little four by five camera which, with its unobtrusive shape and noiseless shutter, allows him to take them unawares.

One does not have to set up a studio in order to do portrait work. Children and grandparents are always willing to be taken at home, but rebel when forced to visit a studio. The mountain in this case goes to Mahomet, for the clever amateur, with quick lens, highly sensi-

tized plates and a good command of camera, is the one who is called upon to photograph these darlings of the household. I know of two young women who are making a fine income by their home photographic visits to their patrons.

It really doesn't matter what subject one chooses, if it is done well. For instance, an amateur very much interested in strange mushroom growth bethought her to photograph them, doing them simply for her own pleasure and benefit, she being a teacher of botany.

Her interest and persistence in the work resulted in the making of a large number of interesting pictures. Some of the photographs are now in possession of



SECOND PRIZE

GEO. T. POWER

Harvard University, and others are used in illustrating a book on mycology.

#### ROUND ROBIN GUILD COMPETITIONS

First prize: Value \$10.00.

Second prize: Value \$5.00.

Third prize: Value \$2.50.

Prizes may be chosen by the winner, and will be awarded in photographic books or magazines published or advertised by us; in enlargements, art portfolios of photogravures, mounts, or other photographic materials advertised by us; or, if preferred, we will send any article of a photographic or art nature which can be bought in Boston for the amount of the prize won.

#### RULES

Membership in THE ROUND ROBIN GUILD, with all its benefits—among which the correspondence privilege probably stands first—is free to all, and we invite every photographer to become a member. Entrance in the monthly competitions is also free to all, whether subscribers to PHOTO-ERA or not.

#### SUBJECTS FOR COMPETITION

July.—“Genre Pictures.” Closes August 31.

August.—“High Speed Photography.” Closes September 30.

September.—“Flower Studies.” Closes October 31.

#### AWARDS—PORTRAITURE

First prize: Mrs. Chas. S. Hayden.

Second prize: Geo. T. Power.

Third prize: Paul R. Morrison.

Honorable Mention: George R. Carter, George K. Muntz, Wm. S. Rice, Paul R. Morrison, Bertha La Montayne, Julia H. Elton, H. C. Heidrich, Mrs. Chas. S. Hayden, John Arthur Maney, and Dr. Edmund Jandrier.

#### ANSWERS TO CORRESPONDENTS

ELLIS BURNS.—A platinum toning bath will give you sepia tones on Solio or Aristo papers. Make up a bath of potassium chloro-platinite, seven and one-half grains; citric acid sixty grains; chloride of sodium, sixty grains; water, thirty ounces. Wash the prints for a few minutes to remove the free silver, place in the toning bath and tone to a dark brown color, then without washing transfer to a bath made of one-fourth oz. carbonate of soda and ten oz. of water. Leave them in this solution five minutes, then fix in a hypo solution made of one ounce of hypo to twenty of water.

A. R. H. — By a typographical error your name in the list of Honorable Mention for pictures in contest for "Reflections" was printed "Hutter," instead of "Hutten." The picture submitted was an interesting one, and while not winning a prize shows that you have the true artistic perceptions as to what goes to the making of a good picture. Please let us see more of your work.

W. G. AND FLORENCE M. R. — Among the recent competitions conducted in the Guild few have brought so large a number of fine pictures as in the contest of which "Reflections" was the subject. The only regret of the editors was that prizes could not be awarded to all those who received Honorable Mention. It was very hard to make the selection, and the decision was made by considering the general work of the competitor.

C. C. DEER. — Will you kindly send another print of the picture submitted in recent competition? We wish to reproduce it in the PHOTO-ERA. It was very interesting indeed, and we should be

pleased to receive a print made on glossy paper, as that reproduces better.

Mrs. W. C. R. — Send direct to the manufacturers for samples of Aristo Gold Post cards. Have you used the Eastman Blue Print cards? You will find them very good indeed for that sort of work. They are inexpensive, costing but fifteen cents per dozen. The coupons were forwarded to you as per request. Shall be glad to see some of your work in the Guild.

M. S. L. — I have had your membership card in the Guild sent to you, and if not received please notify me at once. Your name is in the membership book, and possibly the membership card was lost in transmission. I shall be glad to criticize the picture which you send in a later number of the PHOTO-ERA.

FLORENCE M. — Metric weights are confusing at first; but one soon becomes familiar with the transposing of grammes to grains by remembering that one gramme — the unit of weight of the metric system — is equal to about fifteen grains, and in an avoirdupois ounce there are about thirty grammes. One cubic centimeter of pure water weighs one gramme. You will be able to find in books of mathematics tables for converting grammes to grains, etc.

R. T. J. — You will find in the October PHOTO-ERA for 1905 directions for sensitizing plain paper. It is a very simple process, and you will find no difficulty if you follow the formula faithfully. In case you have trouble, write to the editor and send samples of your paper.

DELOS K. — The print which you send would indicate that the exposure of the negative was correct, but that you had not carried the development far enough to get good contrasts. Try printing under ground glass or in the shade. You could improve the printing qualities of the negatives by intensification.

CARL G. S. — Yes; you can obtain back numbers of the PHOTO-ERA by sending to the office of the publication.

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# The Crucible

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## TIMING MOTORISTS BY THE CAMERA

ONE of the evils of the age is the reckless driving of automobiles, and the souls of motorists have been made sore by sentinels posted to record their speed. But as the evidence of these is often uncertain and questionable, a mechanical method of noting speeds has been devised, the results of which are absolutely beyond question. A time-recording camera is used. In this process, now in use in England, a range, or "trap," is measured with a recording camera at each end.

As the motor-car flies past, it is caught by an almost instantaneous exposure, and by the same movement a watch-face is photographed, thus giving the exact time. On passing the second camera a similar photograph is taken, and the difference in time between the two photographed watch-faces accurately indicates the time occupied in traversing the distance.

The watches used are sealed in a way that renders it impossible for the person in charge of them to tamper with the hands without breaking the seal. The camera thus makes a record which can be produced in court, and can be referred to months afterwards if necessary. — *The (English) Amateur Photographer.*

## GLITTERING OBJECTS

*Glittering objects*, such as glass flower vases, framed pictures, china, ivories, bronzes, polished furniture, etc., are apt to be troublesome to the would-be pictorial photographer. The first step is to try and avoid the troublesome reflections by changing the position of the camera, to right or left, up or down, or altering the directions of the incident light, raising or lowering blinds, by diffusing and scattering the light by muslin blinds, tissue paper, or waiting for a cloudy day. With small objects we may sometimes meet the difficulty by dabbing the tire-

some plate with a ball of soft putty. Or in the case of metal ornament, ivories, a little arrowroot, cornflower, etc., may be tied up in a couple of thicknesses of fine muslin and shaken over the reflecting surface so that it may be covered with a very thin layer of white dust. In the case of bronzes, instead of white powder, use some finely powdered black lead or charcoal. Gold ornaments may be dusted with fine-ground yellow ochre, purchasable at oil and color shops. The reader has probably noticed that in summer his drinking tumbler containing iced liquid becomes dewed or frosted on the outside. This hint may be applied in the case of hollow metal objects, such as cups, goblets, etc. If a lump of ice be put inside the vessel when the camera is ready, a few minutes' patience will show a dulling of the outside, when the exposure should be made at once. Delay is fatal, as the dewdrops get larger and larger and then begin to run down the outside of the vessel. If ice cannot be obtained, we may obtain the effect of cold by putting a few drops of ether or chloroform within the vessel, and causing rapid evaporation and fall of temperature by brisk use of a fan.

## RETOUCHING NEGATIVES

*How to Retain the Likeness.* — Arthur Whiting advocates the following method in place of the common practice of working cleanly across the negative from corner to corner: —

The better method of procedure is to work *successively* from high lights through the half-tones to the shadows, as follows, viz.: First look to the highest lights on the face. If these contain blemishes which, however, will not show on the print, or, in other words, which will not print through, it is better to leave them alone; for whilst working upon them may make the negative look more finished, it will make the subject in the print less so. If the negative is somewhat hard, or strongly lighted,

it is more than possible that none of the highest lights will need retouching at all; but if it is flat or weak, the highest points may be strengthened, and, as the rest of the negative is untouched, it is easy to keep them exactly of the same nature and position as they would have been had more contrast existed previously. For remember always to keep the *centers* (highest points of intensity) of light in their proper places.

The remaining high lights should then be attended to in the order of their density, and not according to their position, and all this should be done before the half-tones or shadows are touched, so that all the features are retouched methodically part by part. The half-tones are next attended to, commencing with those which will print lightest, and working with the others successively until the shadows are reached in turn and worked off in the same order. By working thus, the balances and centers of light and shade may be kept throughout, and only defects will be obliterated, whilst the modeling and character detail are retained with ease. — B. J.

#### TEST FOR HYPO

A GOOD solution for testing for the presence of hypo in the case of either plates or films may be prepared as follows:—

Potassium permanganate.....  $\frac{1}{2}$  grain  
Potassium carbonate..... 5 grains  
Distilled water..... 10 ounces

To test, take a plate or print out of the washer and let the water drain from it into a test tube. Then add a drop or two of the test solution. If no discoloration occurs, no hypo is present. If the solution turns greenish, the negatives are not sufficiently washed.

#### TO DETERMINE THE F. VALUE WITHOUT KNOWLEDGE OF THE FOCAL LENGTH OF LENS

THE plan as stated in *Photography* by Dr. Drysdale is based on the fact that since the aperture of the stop is really defined by the angle which the cone of rays makes when forming the image of a point

of light on the screen, we can therefore focus sharply some fairly distant (infinity) and bright point of light, and then marking the position of the screen, we shift it until the disk of diffused light assumes some definite diameter — say, half an inch. If we measure the distance we have moved the screen, and divide it by the diameter of the disk of light, we get the *f.* value of the stop at once. If, for example, we find that to get a disk of diffused light half an inch in diameter we have to move the screen four inches, the stop employed we know at once to be *f.* 4, divided by one half, which equals *f.* 8. The plan is so simple that it is well it should be more widely known.

#### DRESSING FOR A PORTRAIT

“FEW of the people who come to have pictures made understand the art of dressing for a portrait,” said an old and famous photographer. “Most of them put on their best clothes, and are all the more pleased with themselves if their fashion is up to the minute. They don’t stop to think that these garments will be away out of date and will look freakish in a few years.

“A woman should dress her hair becomingly without regard to fashion, and should wear something soft and artistic — just the suggestion of a garment; then in after years the portrait will never look old fashioned.

“A man? Oh, he ought to drop in in the latter part of the day, when he hasn’t had his hair combed since morning and hasn’t seen a mirror for hours. Men always give the best results when they are snap-shotted — caught unawares and without preparation.”

#### HINT IN PHOTOGRAPH COLORING

GLYCERIN is the finest medium to make water color take to the surface of photographs. A little should be rubbed over the photograph with a pad of flannel, and all visible traces of it removed. Either anilin or transparent water colors will flow freely on this medium which is much better than ox-gall.

# The Filter

## A FOOL RECOGNIZES HIMSELF

A PERTH photographer had a fastidious sitter, who complained that the photos he had taken were not a bit like him, and that no one would recognize them, etc. The photographer took them back, refunded the money, and said "Good day." On the following morning the sitter rushed in boiling with rage. "Confound you!" he exclaimed. "You have put one of those photos of me in your showcase, labeled 'The Biggest Fool in Perth.'" "My good sir," replied the photographer, blandly, "you told me yourself only yesterday that nobody would take that photo to be yourself; that it was quite unrecognizable. Since the photo does not even faintly resemble you, what are you grumbling about?" The sitter, without more ado, departed, saying he should go and invest 6s. 8d. in legal advice. — *London Photographic News*.

## MISERY LIKES COMPANY

She. — "Who is that man you just bowed to?"

He. — "Oh! He's an artist."

She. — "And who is the one with him?"

He. — "He hasn't any money either." — *Journal Amusant*.

## MUCH ADO ABOUT NOTHING

AN old woman who entered a country savings bank not long ago was asked whether she wanted to draw or deposit.

"Nayther; Oi wants to put some money in," was the reply.

The clerk entered the amount and pushed the slip toward her to sign.

"Sign on this line, please," he said.

"Above or below it?"

"Just above it."

"Me whole name?"

"Yes."

"Before Oi was married?"

"No; just as it is now."

"Oi can't write." — *Harper's Weekly*.

## IN 3505 A.D.

First Airship Owner. — "Have any trouble in reaching Mars?"

Second Airship Owner. — "None worth mentioning. I was fined four or five times for scorching on the Milky Way and once for looping the loop on one of Saturn's rings, but that was all." — *Grand Union Herald*.

## BENEFICENT USE OF THE FUZZYTYPE

Clerk, to photographer. — "Please take my picture, but don't let it resemble me."

Photographer. — "What a singular request! Your reason, pray?"

Clerk. — "Between you and me, the picture is intended for the daughter of my employer. If he discovers it in her possession, he'll fire me without ceremony."

Respectfully commended to the "fuzzytype" photographer.

## HE'S THE BOY

Hotel Clerk. — "What did the great singer wish?"

Bell Boy. — "He rang to see if there was any one in the hotel who would run over a few things with him."

Hotel Clerk. — "Send up a chauffeur." — *Harper's Weekly*.

## NO IMMEDIATE DANGER

WINSTON CHURCHILL, the English convert to liberalism, is making a reputation for sharp wit. His curt retort to a woman heckler, "Madam, I will not be henpecked," was the best thing of the recent campaign. He is now raising a mustache. A fair lady was being taken in to dinner by the budding politician.

"Mr. Churchill," she said, "I like your politics as little as I like your mustache."

It should have been a crushing shot, but not so to Churchill. His reply was on the instant:—

"Madam, you are not likely to come in contact with either."





RENDEZVOUS HELD AT BENJAMIN'S STUDIO, CINCINNATI, JUNE 23 AND 24, 1906

Left to right: "PAPA" CRAMER, St. Louis, Mo.; S. L. STEIN, Milwaukee, Wis.; J. C. STRAUSS, St. Louis, Mo.; H. H. PIERCE, Boston, Mass.; E. F. HALL, Buffalo, N. Y.; F. S. CLARK, Detroit, Mich.; I. BENJAMIN, Cincinnati, Ohio; F. A. RINEHART, Omaha, Neb.; G. W. EDMONDSON, Cleveland, Ohio; L. GODLOVE, St. Louis, Mo.

#### I. BENJAMIN, PHOTOGRAPHER

MR. I. BENJAMIN, the well-known photographer of Cincinnati, sailed for Europe, July 19, on the steamer "La Bretagne." His purpose is to establish a branch studio at Paris. Previous to his departure, a party of his fellow photographers visited him in Cincinnati to wish him *bon voyage*. The members of the party were as follows: S. L. Stein, Milwaukee, Wis.; J. C. Strauss, St. Louis, Mo.; "Papa" Cramer, St. Louis, Mo.; Frank Rinehart, Omaha, Neb.; Frank Scott Clark, Detroit, Mich.; George Edmondson, Cleveland, Ohio; Henry Havelock Pierce, Boston, Mass.; and Newport, R. I.; S. F. Hall, Buffalo, N. Y.; Lewis Godlove, St. Louis, Mo.; and Anthony Bill, Cincinnati, Ohio. Mr. Benjamin has been active professionally in Cincinnati for nineteen years, during which time he has been the sole proprietor of his establishment and has won a reputation for himself in picture-making that places him in the ranks

of the best photographers in this country. He studied art at the Cincinnati Art Academy from 1883 to 1888 and was the founder of the Art Students' League of Cincinnati, serving as its president for seven years. He twice received the Grand Prize of the Photographer's Association of Ohio, and was awarded a silver medal for portraiture at the International Exhibition of the American Institute of New York in 1896. He was medalled by the Michigan Photographers' Association and also by the P. A. of A. He received a gold medal for miniatures at the Milwaukee Convention; also Salon honors at Philadelphia, Pittsburgh, and Ohio and a silver medal from the International Exhibition at Turin, Italy. Fresh from his triumphs in his own home, he goes to Paris with the best wishes of friends and admirers, whose name is legion in this country. There, in the French capital, he will be sure to repeat his success and make a name for himself.

## THE PHOTOGRAPHERS' ASSOCIATION OF NEW ENGLAND

MECHANICS BUILDING, BOSTON, MASS.,  
AUGUST 21, 22, AND 23

THE time is rapidly approaching for the Boston Convention, and we wish to make clear to every reader the benefits to be derived from attending.

The American Aristotype Co. proposes giving a thorough school of photography; all negatives will be made by the aid of the Aristo Lamp; radical improvements have been made in the manner of utilizing it as an operating light since last shown in Boston.

Art Talk, by Professor Griffith.

Illustrated Talk on Composition, by Alon Bement.

Expert Talk on Lenses, by S. Laurence.

The primal object of every association should be education, and we have endeavored to make this the principal feature of the Convention; our program promises valuable information. We know it will merit your approval; we hope it will attract and bring you to Boston. We set our standard high at the last Convention and maintained it. This year finds it placed even higher, and we mean to attain it.

While we consider entertainment of secondary importance, we have not side-tracked it, and the committee is arranging a trip to one of the beaches. As a result of the social side of our program we sincerely hope for a closer fraternal union of our members. Let me suggest to every one attending that the reception committee is appointed to enlarge your acquaintance. It will be their pleasure to assist each photographer to a larger circle of friends; you will know them by their badges. If you desire to meet members, do not be afraid to ask them for an introduction. It is the desire of the Executive Board, and it should be the desire of every member, to have a general feeling of good-fellowship. If you are alone this year and lack companions, it will be because you fail to do your part.

Our exhibit will surpass all former efforts. We are also assured of a fine lot of work from individual exhibitors all over the country. We ask especially for a representative exhibit from New England.

Every progressive man in the business should attend the Convention, if for no other purpose than to see what the manufacturers and dealers are offering. The paper makers, the manufacturers of lenses, mount makers, background painters, etc., every one catering to the photographers' wants, will be on hand with the year's inventions. We are justified in saying the exhibition in this department will eclipse all former displays.

Any proprietor of a studio in New England and Maritime Provinces is eligible to active membership by payment of initiation fee of \$2.00 and one year's dues — \$2.00. All employees may become active members upon payment of one year's dues — \$1.00 — and no initiation fee. Dealers or manufacturers of photographic goods or their representatives may become associate members on payment of \$2.00.

The Executive Committee has secured low rates at the Hotel Brunswick, which is the official headquarters, located in the Back Bay, close to the Museum of Fine Arts, Public Library and five minutes walk to the Convention Hall.

Rooms, \$1.50 and upwards. Two occupying one room, \$2.50; \$1.00 extra for private bath. European plan.

Now get busy; make your exhibit at once and send it to Boston; compare it with the other fellow's production, see which excels and why it does so. Mr. A. Bement will be on hand to criticize and tell you why; don't be afraid to ask.

J. H. C. EVANOFF,

*Sec. P. A. of N. E., Boston, Mass.*

We are pleased to announce that the firm of George Murphy, Inc., 59 East Ninth St., New York City, has secured the American agency for the well-known Ross lenses — a good product in the hands of a good house. For many years

the Ross lenses have been among the most popular lenses sold in this country, and as a new booklet is being gotten out, our readers who are interested in the lens problem should send in their request for a copy at once. We especially call attention to the Hemocentric, perhaps the most popular of the Ross series, which is one of the most rapid anastigmats on the market, possessing chromatic correction, flatness of field, freedom from astigmatism, coma, distortion, and zonal spherical aberration which not only gives far greater certainty in focusing, and more fineness and contrast in the details, but also allows the negatives to be enlarged directly by means of a telephoto attachment, or indirectly from the finished negative, with much more satisfactory results than with the ordinary anastigmat.

MR. THOMAS MANLEY, the inventor of the "Ozotype" process, has recently perfected a new method of producing carbon prints which means much to the photographic world. The prints are made indirectly by the exposure of bromide paper to light, from which carbon prints of any color may be taken direct without the need of daylight or a double transfer. It is not necessary to sensitize or expose the carbon tissue; it is merely placed in contact for a certain time with the bromide print. As bromide paper is the sensitive surface used, it will keep indefinitely and may be procured anywhere. Some distinct advantages gained are the fact that enlarged prints can be made from bromide enlargements without the need of an enlarged negative; also that several carbon prints may be obtained from one bromide print without in any way spoiling it; that any class of negative can be used, and finally that the carbon prints may be on the bromide paper itself or any other prepared surface. We hope next month to publish a full account of the "Ozobrome" process, as Mr. Manley intends to call it.

## NEGATIVES WANTED

THE Bausch & Lomb Optical Company announce that they are desirous of securing views of famous places in the United States and Canada, and will pay \$3.00 each for negatives made with any of their Anastigmat lenses, that is with the Bausch & Lomb-Zeiss Unar, Tessar, Protar IIa IV, VII, VIIa, and the Bausch & Lomb Plastigmat.

The views may be of famous buildings, churches, statues, monuments, of well-known objects in nature as the Grand Canon of Arizona, Yosemite Valley, anything that is renowned in history, poem or story. This would naturally exclude subjects which, interesting and picturesque in themselves, have only a local value, as a library or government building in some city or town.

Interior views also, will be accepted, but there must be some interest other than purely local connected with the place.

The negatives are to be no larger than  $5 \times 7$ , and no smaller than  $3\frac{1}{4} \times 3\frac{1}{4}$ . Prints may be submitted to the Bausch & Lomb Optical Company, Rochester, N. Y., at any time, the sooner, the better. They reserve the right to accept or reject any or all prints submitted, and in the event of the purchase of negatives, to use them in any way they choose for purposes of general publicity.

Prints should be plainly marked upon the back with full data, including subject of picture, name of lens, size, stop, time of exposure, name and address of sender.

If senders of prints desire them returned, it will be necessary to enclose stamps for that purpose.

FROM George Murphy, Inc., 57 East Ninth St., New York City, we have received a catalogue of cameras and photographic materials for 1906-1907. Larger than ever before, this volume contains everything which a photographer could desire, and furnishes a handy encyclopedia for reference. We are pleased to

state that a copy will be sent to any reader of this magazine, and, furthermore, that we can highly recommend this firm, now in its twenty-eighth year of successful business.

## THE VELOX BOOK

ONE of the most interesting and instructive booklets which has been issued by the Eastman Kodak Co. is *The Velox Book*, just published. Every photographer, whether professional or amateur, should have a copy,—the user of Velox to perfect himself in the manipulation of this paper of sterling quality, the novice to familiarize himself with its possibilities. Replete with information, the booklet omits no suggestion which could be of service in the successful manipulation of Velox paper. Following a description of the various surfaces, weights, and grades in which the paper is furnished, and the sort of work for which each is adapted, is a Velox Glossary of inestimable value to the beginner. There are several pages which fully describe the proper methods of exposing, developing, fixing, washing and mounting, while the worker who desires sepia red or blue tones will find formulas and directions. Considerable space is devoted to "dodging" and methods of double printing, and a classified list of the causes of non-success enables the worker to locate and remedy any trouble immediately. One of these booklets will be sent upon request, and no photographer should be without one.

## THE C. P. GOERZ SILVER CUP COMPETITION

THE C. P. Goerz Optical Works of New York take pleasure in stating that they have offered to the professional photographers of the United States and Canada a silver trophy, in the form of a cup, of a value of \$600.00, on the following conditions:—

First: The silver cup will be offered as a prize to the successful competitor who

shall have the award twice in succession or three times in all.

Second: Each successful competitor, except the final owner of the cup, will be presented with a prize of \$100.00, payable in gold or in goods of our manufacture, at his option.

Third: The competition is open to all *bona fide* professional portrait photographers of the United States and Canada.

Fourth: *Portraits* only are accepted in this competition. Subject, size, kind and number of prints are entirely at the discretion of the competitor.

Fifth: Every photographer desiring to compete is invited to send in his name to the C. P. Goerz Optical Works, and will receive in return a number with which he is to mark his picture or pictures. Should any competitor send in more than one picture, then each one must be numbered, and marked with the letters *a, b, c*, etc., in addition to the number.

Sixth: The pictures sent in for competition will be exhibited at the National Conventions of the P. A. of A. by the C. P. Goerz Optical Works, who, for that purpose, bind themselves to rent adequate space in the coming Conventions.

Seventh: All competing pictures are to be mounted and suitably framed.

Eighth: The prize-winning picture will become the property of the C. P. Goerz Optical Works. Copyright, if any, remains vested in the competitor.

Ninth: No picture having won a prize in this competition can be entered a second time.

Tenth: All successive awards will be made during the Exposition of the National Conventions of P. A. of A. All competing pictures, marked in accordance with Rule Five, are to be sent prepaid to C. P. Goerz, care National Convention, or, before opening of same, to C. P. Goerz Optical Works, 52 Union Square, New York.

Eleventh: The C. P. Goerz Optical

## NOTES AND NEWS

Works will name a jury of well-known members of P. A. of A. to pass on the merits of the pictures sent in, and to make the award. The names of the jurors will be announced a few weeks prior to the meeting of the Convention.

donor will thereupon compare the number with his list of competitors, and attach to the successful picture the name of the winner, and the mention of its award.

The number list, being a confidential



C. J. VAN DEVENTER

FIRST VICE-PRESIDENT, P. A. OF A.

Twelfth: The jurors will award the prize to the picture considered by a majority of them to possess the highest artistic value, combined with the most perfect technique.

Thirteenth: The jury, on having made its award, will inform the donor of the number of the winning picture. The

document, shall not pass out of the hands of the donor or his representative. The names of unsuccessful competitors will not be published without their special consent.

Fourteenth: The decision of the jury, or of a majority of its members, is final and binding for all parties concerned.

## NOTES AND NEWS

Fifteenth: The cup will be exhibited at the yearly National Conventions of the P. A. of A., and arrangements will be made to exhibit it also in the principal cities of the United States and Canada,

winner will then be entrusted with the custody of the cup for the ensuing year. He will be held responsible for its safe keeping, and shall return it to the donor for the next competition one week before



F. R. BARROWS

TREASURER, P. A. OF A.

for which purpose the kind cooperation of dealers is earnestly requested.

Sixteenth: The cup will be engraved at the expense of the donor with the name of the successful competitor and the year of his competition, immediately after the award has been made. The

the opening of the following National Convention, unless it becomes his full property in accordance with the terms of this competition.

For further information and particulars, address the C. P. Goerz Optical Works, L. J. R. Holst.

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MYRA WIGGINS

EARLY MORNING



# PHOTO - ERA

The American Journal of Photography

VOL. XVII

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No. 3



KATHERINE BINGHAM

SUNRISE ON THE ATLANTIC

## WOMEN IN PHOTOGRAPHY

RICHARD HINES, JR.

THE American woman has long since taken her place in the world of business, in the realm of literature, in the broad domain of science, as well as in educational and other lines of human activity; nor has the field of photography been overlooked by those American women who by innate talent have found themselves peculiarly fitted for the exploitation of this the latest and most progressive of the art-sciences.

One of the first American women to turn to photography as an outlet for her talent in an artistic direction was, perhaps, Miss Catherine Weed Barnes, now the wife of an Englishman, Mr. H. Snowden Ward, and residing abroad. This was twenty years ago. Probably at that time the women who were interested in photography could have been counted on the fingers of one hand; while now, if even those who have made a success of it were marshalled together, there would beyond doubt be a goodly number of them; for almost daily there is reported the fact that another woman photographer "has arrived," and either the technical or lay press tells of her beginning and how she climbed the ladder of success.

In many instances it is the same old story: the woman comes into possession of a camera; first it amuses her; then she becomes more deeply interested and takes the matter seriously; she discovers that she has talent in the direction of art; she shows her pictures to some competent judge and is encouraged to con-



MRS. CHARLES S. HAYDEN

SERMON TIME

tinue her work; then follows study along artistic and technical lines; her pictures are accepted to be hung on the walls of the salons, and she eventually achieves the reward of her efforts. Many women, when they discover themselves in photography, have entered the professional ranks, where they have taken places alongside of the foremost men in the profession. Others continue purely as amateurs, but they make their cameras pay the expenses of their art training and their trips abroad.

Among those in the professional ranks who have achieved success, and some of them fame, are Mrs. Kasebier, Zaida Ben Yusuf, Mary Carnell, Mary Devens, Mrs. Caleb Keene, Mrs. Elizabeth Flint Wade, Sarah Holm, Mary Vaux, Eva Watson Schutze, Adelaide Hanscom, Mathilde Weil, Jessie Tarbox Beals, Nellie



HELEN P. GATCH

THE LACE CAP

Coutant, Clarissa Hovey, Katherine Bingham, the Misses Allen, Gerhardt Sisters, Shelby Sisters, Miss Reineke, Frances Johnstone, Alice Austin and several others.

The women who have been successful as amateur photographers are numbered by hundreds, but among those who are best known may be mentioned Mrs. George A. Stanbery, Katherine Stanbery, Myra Wiggins, Mrs. G. A. Barton, Mrs. W. W. Pearce, Virginia M. Prall, Sarah C. Sears, Marion Silverston, Elcanor W. Willard, Agnes Warburg, Bessie Stanford, W. and G. Parrish, Mary H. Mullen, Mrs. Charles S. Hayden, Mary G. Huntsman, Helen P. Gatch, Jane Dudley, Helen W. Cooke, Mrs. C. E. Colman, Mrs. Carine Cadby, Mrs. Louise Birt Baynes, Fedora E. D. Brown, Margaret L. Bodine, Nina F. Lewis, Alice Boughton, Jeanne Bennett, Mrs. Rowland B. French, Annie W. Brigman, Emma J. Fitz, Emma Farnsworth, Mrs. Marion Stark Gaines, Mrs. Walter Griffin and others.

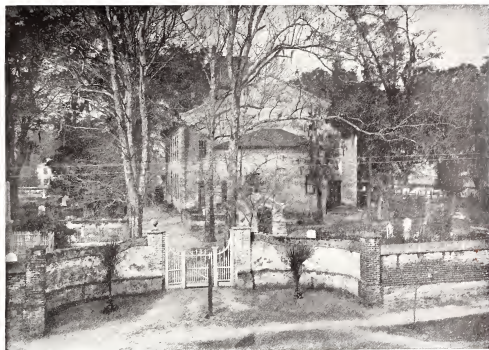
There is no more suitable work for woman than photography, whether she takes it up with a view of making it a profession or simply as a delightful pastime to give pleasure to herself and to others. She is by nature peculiarly fitted to the work, and photography is becoming more and more recognized as a field of en-



THE MISSES ALLEN

EARLY SPRING

deavor peculiarly suited to her. There is scarcely a woman who has not some inborn artistic feeling, latent though it may be until brought out by study and training. Nevertheless, it is there, and its presence, in greater or less degree, is promise of success in photography. Cleanliness and patience are two of the cardinal virtues necessary to the successful pursuit of photography. The first seems to be a God-given attribute to most women; while if they have not the latter in sufficient amount, it is a virtue that can be cultivated. The light, delicate touch of women, the eye for light and shade, and their artistic perception, render them admirably fitted to succeed in this work.



MRS. ROWLAND B. FRENCH

SOUTHERN CHURCHYARD

Success, however, is not to be attained by simply "pushing the button" and leaving others "to do the rest." That is one of the fallacies of photography which is responsible for so much bad work and so many dissatisfied amateurs. There is no royal road to success in photography any more than there is in any other branch of human effort. Success is attained only by careful, painstaking manipulation and study.

Some eight or ten years ago the writer delivered an address on the subject which heads this article before the Art League of his home city, and therefore, for a period extending over a year, he had much correspondence with the women who were that long ago accounted prominent in photography, and the publication of extracts from that correspondence will not be out of place here in telling what those women achieved and how they achieved it.

Mrs. Ward, already mentioned in this article, took up photography in 1886, the suggestion that she should make it her specialty having first come from her mother. Success was not slow to come to her, for she had prepared herself by long years of study. Her talent was more and more recognized. An attic was her first studio, and a bathroom served as the dark room. She worked patiently and perseveringly, and finally joined the Society of New York Amateur Photographers, where she read so many practical papers that invitations came pouring in upon her from other clubs to give them the benefit of her experience. She

was the first woman whom these societies had the good sense to acknowledge, and she proved, as so many other women have done, that it is the first step that counts. She was one of the editors of the *American Amateur Photographer* for a number of years, resigning that position in 1894, and is now a member of many of the most exclusive photographic societies of America and Great Britain. She read a paper on "Amateur Photography" at the World's Fair, Chicago, and was a member of the Liberal Arts Board of Judges, being the only woman representing photography there. Mrs. Ward is not alone interested in photography, but in literature as well, and is said to be a very successful lecturer. Though now residing with her husband in England, it was as an American that she achieved her success in photography and practically blazed the way for other American women who have so worthily followed in her footsteps.

Miss Frances Johnstone, of Washington, is another woman photographer who has achieved success both professionally and artistically. She may be characterized as the official photographer to the White House, and her pictures of members of the President's family are marked by great delicacy of tone values and a full knowledge of composition. Miss Johnstone was highly honored during the Louisiana Purchase Exposition, held at St. Louis, being the only woman member of the board of judges of the artistic photographs displayed there.

Another Washington woman photographer who has taken high rank, and whose work has been commended by more capable pens than mine, is Miss Virginia M. Prall. There is a deep religious feeling pervading many of Miss Prall's pictures that I have seen reproduced, which appeals strongly to the beholder.

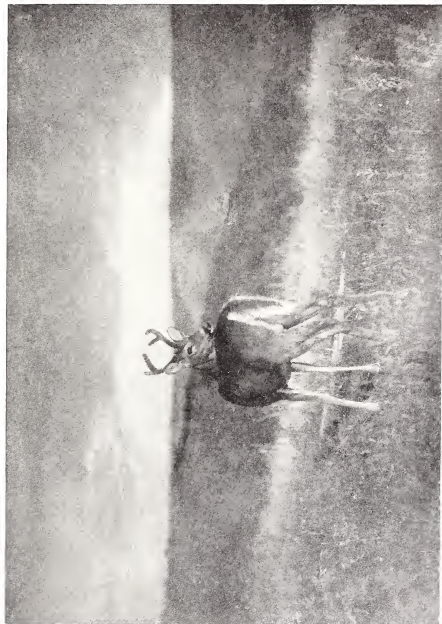
Mrs. Myra Wiggins, of Salem, Ore., is another successful worker who has made her camera pay for her artistic training and tours abroad. She is well known by her many genre pictures, which are always pleasing and interesting.

Misses W. and G. Parrish, of St. Louis, members and officers of the Salon Club of America, have also achieved great success of recent years, and Miss Mary Carnell, of Philadelphia, ranks with the foremost men in the profession as a portrait artist and delineator of character by means of the camera. Her portrait of Mayor Cutler of Niagara Falls, published in the August PHOTO-ERA, is full of character and technical excellences.

Mrs. W. W. Pearce, of Waukegan, Ill., has made a success in her specialty of photographing children, and her little models are familiar to all readers of the more prominent photographic journals, where her work is frequently reproduced.

Mrs. Jessie Tarbox Beals is a woman photographer of great energy and tireless perseverance, who has made a great success commercially and has accomplished many things in a photographic way which even the hardier men have hesitated to undertake.

Mrs. Helen P. Gatch, of Salem, Ore., has also been very successful in her photographic work, being particularly happy in her genre studies, which always have a story to tell, and in which the telling is well and artistically done.



LOUISE BIRT BAYNES



MARY G. HUNTSMAN

FEEDING THE CHICKENS

That other women who contemplate photography may not enter into it "lightly or unadvisedly" any more than they would into the matrimonial state, a few extracts from letters received some years ago from those who have succeeded will not be amiss here.

Miss Emma Justine Farnsworth, of Albany, N. Y., says that to make a success of photography one should have a keen artistic temperament and endless patience, for, like any other branch of art, photography requires close application, and the road is long.

Miss Zaida Ben Yusuf says: "I took up the camera at first for amusement, but only for a short time, as I was about to go abroad. I showed one or two of my very limited number of prints to Mr. George Davison, London, and he at





JANE DUDLEY

HUNGRY AND THIRSTY

once advised me to go ahead and make more, as he said that what I had done indicated the spirit of the new school of photography. Shortly after my return from Europe I arranged my studio and started to work seriously, and I find that the indications are that the better class of people are quite ready for a higher and broader quality of photographic portrait than most professionals will admit." These words were uttered eight years ago, and in the light of subsequent events they were almost prophetic.

There is no doubt that in the coming years women will have a large part in the artistic and pictorial development of photography; and that many have already taken their places in the front ranks alongside of the most noted men in the profession cannot be denied.



SARAH HOLM

DECORATIVE PORTRAIT

### "OZOBROME," A NEW CARBON PROCESS

E. W. FOXLEE

**M**R. THOMAS MANLY, the inventor of the "Ozotype" process, has recently perfected a new method of producing carbon prints, possessing very distinct claims to notice; namely, first, that prints are obtained indirectly by the exposure of bromide paper to light; in other words, from a bromide print or enlargement; and, secondly, that the carbon copies are obtained without exposure to light. Since the patent specification of this process, "Ozobrome," as Mr. Manly proposes to call it, has appeared, the process is thus open for discussion.

Carbon printing, as everybody knows, was invented by Sir J. W. Swan, and published by him in 1864, and it is a little strange, considering the great advance made in the various processes of photography since that time, that the carbon process remains the same and is worked in practically the same way as it was forty years ago. One of the great obstacles to the more universal use of this process is that a double transfer of the picture is necessary if it is to show the "right way about"—that is, as regards right and left. But such is, of course, necessary, unless a laterally reversed negative is used in the printing. Also day-

light is absolutely necessary for the exposure of a carbon print. Both of these drawbacks are obviated in the new process.

#### WARNERKE'S SILVER PIGMENT PROCESS

The "Ozobrome" process is associated with the bromide paper process — an idea, let me say at once, which is by no means a new one. A quarter of a century ago the late Mr. Leon Warnerke discovered that a gelatinous bromide of silver film, developed with pyrogallic acid, became analogous in character to a carbon one that had been exposed to light; that is, the parts acted upon by light had been rendered insoluble in warm water. This formed the subject of a patent, No. 1436, which he obtained in 1881. One of the methods described in the specification is to mix a pigment with the bromide emulsion, spread it on paper, and dry. Then expose under a negative and develop in the usual way for bromides. This done, a piece of single transfer paper is squeegeed upon it and then the picture is developed in warm water, as if it were an ordinary carbon print. In this way a carbon picture is obtained on a silver image. The latter could then be got rid of by solution in perchloride of iron, leaving only the carbon behind. In this way a carbon picture is obtained with only the exposure to light required for a bromide. Warnerke's process has been reinvented more than once, in a modified form, and within the last couple of years in Germany. The modification in this instance was the immersing of the transfer paper in a solution of the bichromate of potash before applying it to the bromide picture. Nothing practical, however, has come of these processes, and that can readily be understood when the difficulty is considered of developing a bromide picture to the right depth on a dark surface like carbon tissue.

#### THE TWO METHODS OF "OZOBROME" PRINTING.

Mr. Manly's new process, which he has patented, is quite distinct from the above, and is based upon an entirely different principle. In this process a bromide picture which may be a direct print from the negative, or an enlargement, is produced in the ordinary way by artificial light. After it has been developed, fixed and washed, it is put into a five per cent solution of formalin for five minutes to harden the film and render it insoluble in warm water. It is then washed to free it from the formalin. It may then be used at once, or it may be dried and used at any future time. Bromide prints already in existence, if treated with the formalin, may be utilized.

Here is the procedure: if the picture has been dried it is put into cold water and a piece of the pigment plaster — the inventor says the ozotype plaster alone is suitable — is taken and immersed till limp in the patent "pigmenting solution." The two are then squeegeed together and allowed to rest for half an hour or so. The "pigmenting solution" is, according to the specification, of potassium bichromate with a mixture of potassium ferricyanide and potassium bromide, to which may be added a small quantity of alum. The print and plaster



ADELAIDE HANSCOM

THE BIRD'S NEST

having remained in contact for the necessary time, there are then two methods of procedure open to us. The first is as follows: the picture, with its adherent plaster, is put into warm water at a temperature of  $100^{\circ}$  to  $110^{\circ}$  F. After a short time the pigment will be seen exuding from the edges, when the plaster can be stripped off and the unaltered gelatine washed away, just as in the ordinary carbon process. Here we get a non-reversed carbon picture on top of the silver one, the color of which has been changed from a black to a yellowish brown by the action of the carbon sensitizing solution. The silver image, if desired, can then be got rid of by dissolving it away with the usual ferricyanide and hypo reducer, or with a solution of perchloride of iron, as suggested by Warnerke.

The second method of working, which seems to me to be far more commercially valuable than the first, is slightly more trouble, but possesses very decided advantages. Instead of putting the picture with its adherent plaster direct in warm water it is put into cold, the plaster stripped off, and at once squeegeed on to a piece of single transfer paper. It is then placed between blotting-paper and allowed to rest for ten minutes or so, as in the usual method of working the



MRS. W. W. PEARCE

FIRST STEPS

carbon process by single transfer. It is then developed in warm water in the usual way. Here, again, we get a carbon picture which is not reversed as regards right and left, but without a silver image beneath it. The bromide original, which has been changed from black to a yellow brown, is washed to free it from the chemicals, and can then be redeveloped with any of the ordinary developers for bromide papers, and the print then becomes equal in appearance to an original bromide. What is more, it can be used again to produce other carbon pictures. Mr. Manly tells us that the same bromide original will continue to serve so long as the paper foundation will hold together.

As to the theory of his process, the inventor states in the patent specification: "In the process forming the subject of my invention the ferricyanide and haloid salts first bleach or halogenise the silver image, and the reducing action, thereby set up, is taken advantage of to decompose the bichromate salt, rendering the gelatine insoluble. The bichromate salt has, therefore, only a secondary action, and is not affected by the silver image. This is shown by the number of prints that can be produced from a single bromide silver print."

#### A CHEAP AND QUICK ROUTE TO CARBON ENLARGEMENTS

No doubt many will be curious as to the quality of the carbon pictures produced by this method. All I can say, from my own experiments, is that they are just ordinary carbon pictures, from which they cannot be distinguished. With a good bromide original, the carbon prints I have made have been quite as good as if they had been printed in carbon from the negative itself. If this new process fulfils the expectations of its inventor, and from my limited experiments I see no reason why it should not, it will prove a great acquisition to workers of carbon. Almost every one is now familiar with the making of direct prints and enlargements on bromide paper by artificial light, and when once a bromide picture is obtained many carbon ones may be made from it without the action of light.

In the production of carbon enlargements the process should prove of great value. In the method at present followed a transparency has first to be made from the negative, and from that an enlarged negative. These two operations involve considerable time and there is a certain loss of quality entailed. When the enlarged negative is obtained the prints have to be made from it, which in winter is a long operation, particularly if a number are required. By the new method the bromide, contact print, or enlargement is made direct from the original negative, and, once obtained, a good number of carbon prints may be made from it without the aid of light.

#### WORKING INSTRUCTIONS FOR THE "OZOBROME" PROCESS

The following are the instructions issued in a preliminary circular of the "Ozobrome" process, from which, with the inventor's permission, we quote:—

*Materials Required.*—A bromide print, a piece of pigment plaster, and patent pigmenting solution. Both bromide and gaslight prints are suitable. Ozotype pigment plasters are alone suitable. Every trace of hypo must have been thoroughly removed from the bromide print.

To harden the gelatine surface, soak the print in a ten per cent solution of formalin for five minutes, and wash for about ten minutes. Of course, the print may be dried and kept any time after hardening. Pour the working pigmenting solution into a porcelain dish, somewhat larger than the bromide print, and place another dish containing cold water alongside of it. Take the bromide print and immerse it in the dish of cold water, face upwards, and remove any air-bells.



MISS REINEKE & CO.  
PORTRAIT





JESSIE TARBOX BEALS

IN JAPAN

Take the pigment plaster and immerse it in the pigmenting solution, removing any air-bells. As soon as the pigment plaster becomes limp or saturated, transfer it to the dish of water, and place it face downwards upon the bromide print which is already there, and immediately bring the two papers clinging together out of the dish and squeegee them into contact with a roller squeegee upon some flat, hard surface, such as glass or zinc. (It is advisable that the thinner of the two papers should be uppermost when squeegeeing.) Then hang them up, or place upon blotting-paper till ready for development.





W. AND G. PARRISH

THE WOOD FAERY

N.B.—The operation of bringing the saturated plaster into contact with the print under the water should be done as quickly as possible (say, four or five seconds), otherwise some of the pigmenting solution contained in the gelatine film will be lost by diffusion in the water.

The water should be changed after each print has been manipulated.

Leave the bromide print with its adhering plaster for about half an hour or forty minutes. At the expiration of the specified time there are two methods which can be adopted to produce pigmented pictures.

#### OZOTYPE-OZOBROME

*Method I.*—This is the non-transfer or ozotype method of pigmenting in which the bromide print itself is made to form the support of the picture, and is recommended for artistic work on the various grades of rough bromide paper on the market.

The prints by this method may be more easily worked upon with a brush than those by Method II.

*Manipulation for Method I.*— Immerse the adhering papers in hot water at about 105° or 110° F. Feel at the corners whether the papers are likely to separate easily. If so, remove the paper backing of the pigment plaster with a steady, unbroken pull, leaving the print in the water and throwing away the plaster backing. After a minute or two place the print upon a sheet of zinc and remove all the soluble gelatine by moving the print up and down in the warm water, finishing the development by pouring the hot water upon the print with a small mug. Then wash the print in cold water for a few minutes.

Should any of the black silver deposit remain under the gelatine in the very deep shadows, it may be easily removed by the Howard Farmer reducer, after which wash for fifteen minutes.

#### CARBON-OZOBROME

*Method II.*— This is the transfer or carbon process in which the image, impressed upon the plaster by contact with the bromide print, is transferred to another support, leaving the original bromide print available for further transfers.

*Manipulation for Method II.*— Instead of placing the adhering papers in hot water, they are plunged into cold water, and after about one minute's soaking the papers can be easily separated by a steady pull from a corner. In this case the pigmented gelatine of the plaster will adhere to its own support, leaving the bromide print uncovered and changed from black to a light brown color. As the bromide print may be redeveloped and used again, it is well to place it in a separate dish of cold water at once, preparatory to washing.

The plaster now represents the exposed tissue in ordinary carbon printing, with the immense advantage that the image is reversed as regards right and left, thus securing an unreversed picture by single transfer.

Keep the plaster in the cold water face downwards, and slide a piece of single transfer paper, gelatine surface upwards, underneath it.

After about thirty seconds, bring the underlying transfer paper into contact with the pigment plaster, and lift the two papers clinging together out of the water, place them on a sheet of zinc or glass, and squeeze them into contact, exactly as in carbon printing. Place between blotting-paper under slight pressure, and after fifteen or twenty minutes develop as in Method I.

After separation from the pigment plaster, wash the print in cold water for half an hour, when it will be ready for redevelopment. Place the thoroughly washed print in a porcelain dish and pour over it a bromide developing solution, such as amidol, hydroquinone, etc.; then again wash thoroughly for half an hour.

The bromide print is now restored to its original condition and efficiency, and can be used again for transfer printing. In fact, with care, as many carbon prints can be made from one bromide print as the strength and substance of the original bromide paper will allow.— *British Journal of Photography*.



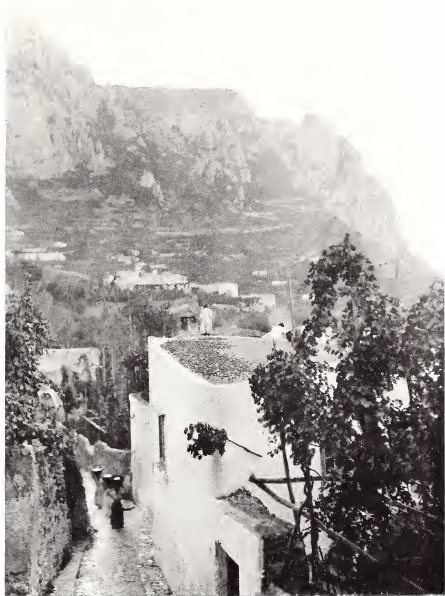
ZAIDA BEN YUSUF  
ENTRANCE TO THE VILLAGE OF CAPRI  
TAKEN WITH NO. 2, SERIES B, GOERZ LENS





ZAIDA BEN YUSUF  
CAPRI — SUNLIGHT AND SHADOW  
TAKEN WITH NO. 2, SERIES B, GOERZ LENS





ZAIDA BEN YUSUF  
CAPRI — DRYING FIGS ON THE HOUSETOPS  
TAKEN WITH NO. 2, SERIES B, GOERZ LENS





ELEANOR W. WILLARD

HOMeward AT EVENING

## THE EASIEST AS WELL AS THE MOST SCIENTIFIC METHOD OF DEVELOPMENT

GASTON M. ALVES

**T**HE average professional still looks upon the time method of development as "amateurish" and a makeshift; but the real truth is that that system, when rightly applied, is much surer, and much better founded in the practical scientifics of the subject, than is the old one of development by inspection. Indeed, given a miscellaneous lot of exposures, a mere tyro, carefully following directions, will get more acceptable negatives than will an old professional following his common methods of inspection. To make this plain, let us state certain basic facts, all of which have been fully established by the most careful and adequate experimentation. These basic facts are:

- (1) The longer an exposed plate lies in the developer the greater will be its density.
- (2) The longer it lies in the developer, within practical limits, the greater will be its contrasts.



VIRGINIA M. PRALL  
A MEDIEVAL BELLE





MARY CARNELL

CHILD STUDY

(3) All exposures, whether slightly exposed or greatly exposed, provided they all be usable exposures, will reach their proper gradations of light and shade, i.e., their proper contrasts, in the same length of time, the temperature and strength of solution of the developing agent being the same.

(4) The proper contrasts, or natural gradations of light and shade, in any negative are of prime importance for an accurate and pleasing record of the subject. However, the density, while important, has only a secondary value, its defects being largely cared for and cured in the selected methods of printing.

To reiterate: the proper contrasts are all important for the truthful representation of the subject; while an imperfect density may be successfully cared for in the after work.

Bearing the foregoing facts in mind, let us now consider what happens under the two comparative methods of development.





HELEN W. COOKE

THE LAUGHING BOY

First, as to the old method by inspection: no man can properly distinguish when a negative has reached its right contrasts in the dark room. Indeed, when a negative has been developed, fixed, dried and held against the light, no man can absolutely tell whether the contrasts are just right. The final and sure test is *to make a print*. Now, as the most experienced worker in making the negative cannot judge of the proper contrasts, there is nothing left to him but to go solely by the density; and this he may easily do. If the exposure of the plate has been nicely timed, and when in the developing he has got his proper density, he will at the same time have gotten the proper contrasts, and all will be well. But the ideal exposure with all of us is an accident, and consequently in our developing we must continually deal with greater or less aberrations. If the worker by inspection is developing an underexposure, going by density, he will be almost sure to leave the plate in too long and thus get a more or less over-contrasty negative, often running into such contrasts as will yield only a harsh "chalk and



CARINE CADBY  
FLOWER STUDY





FEDORA E. D. BROWN

EDGE OF THE POOL

soot" print. Let us now follow the worker with the same underexposed plate, under the time method: at the normal time he will lift the plate, rinse it, and place it in the hypo. He will have a thin negative, but if the plate has not been hopelessly underexposed it will yield, under the proper printing, pleasing and truthful prints — provided, of course, that the lighting of the subject or landscape has been good.

Now, as to overexposures: the worker by inspection will be almost sure to take out his plate too soon, resulting in a negative which will yield only lifeless prints. The worker by time will leave his plate for the normal time, and the negative, though quite dense, will yield prints of correct contrasts.

It will be seen that the worker by inspection will get negatives of nearer uniform density, but more or less unnatural contrasts in the resulting prints, while the worker by time will get negatives of varying density, but uniform prints. And as the prints are the end, and the negatives are only means to the end, the lesson is obvious.

In what follows I propose to deal only with the principles of time development and certain details of the work, which I have found satisfactory.

It must be obvious to every one that the time of the development of a plate depends solely upon the strength of the chemicals used, and upon the temperature. With a certain strength solution and a certain temperature, the proper

time is gotten by experiment or test. When this time is once gotten by test, it will always be the same under like conditions of chemicals and temperature. Also bear in mind that this time, when once gotten, does not vary with correct, under, or over exposures, so that the exposures be usable; for under the foregoing fact (3), all such exposures reach their proper development in the same time. Now, it is plain that we may always control the exact strength of our solutions, but it is not always convenient to work under the same precise temperature of the solutions. Hence we need to know what alterations in the time we should make in order to meet slightly varying temperatures. We will assume that a temperature of  $70^{\circ}$  F. is the best for development. However, it will come within good practice to work within the limits of  $60^{\circ}$  to  $76^{\circ}$ , if convenience demands. Let us now assume that with a certain strength solution, at a temperature of, say,  $70^{\circ}$ , we have found by test that it takes, say, just five minutes to properly develop a negative which will yield a print with the natural balancing of the lights and shades, i.e., contrasts. At another time, with the same strength solution, but with a temperature of, say,  $66^{\circ}$ , the question is, How much must we increase our five minutes in order to get a correctly developed negative? The key to this question will be given in the following:

Taking  $70^{\circ}$  and 5' of time as a basis, it will be sufficiently accurate within the above limits of  $60^{\circ}$  to  $76^{\circ}$  to allow a quarter of a minute increase of time for every degree decrease of temperature from the  $70$  to  $60$ . Consequently, we solve the above question by allowing four quarters of time increase; that is, we have six minutes as the answer. Had the temperature of solution been greater than the  $70^{\circ}$ , then there would have been a quarter of a minute decrease of time for each increase of degrees from the  $70$  to  $76$ . All of the foregoing is very simple, and may be easily carried in the mind, but to make it plainer, let us tabulate it:

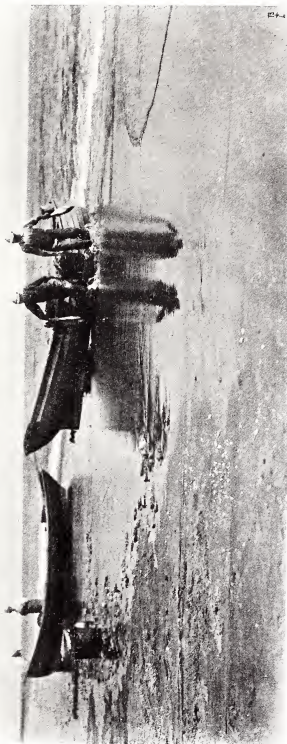
Minutes	Degrees	Minutes	Degrees
$3\frac{1}{2}$ .....	$76$	$5\frac{1}{2}$ .....	$68$
$3\frac{3}{4}$ .....	$75$	$5\frac{3}{4}$ .....	$67$
$4$ .....	$74$	$6$ .....	$66$
$4\frac{1}{4}$ .....	$73$	$6\frac{1}{4}$ .....	$65$
$4\frac{1}{2}$ .....	$72$	$6\frac{1}{2}$ .....	$64$
$4\frac{3}{4}$ .....	$71$	$6\frac{3}{4}$ .....	$63$
$5$ .....	$70$	$7$ .....	$62$
$5\frac{1}{4}$ .....	$69$	$7\frac{1}{4}$ .....	$61$
		$7\frac{1}{2}$ .....	$60$

The reason I have a time of five minutes to  $70^{\circ}$  is because I find that time just about right — time enough to do all things in order, and not too long to be tedious. It carries with it a rather "soft" solution — with me, one and a half grains of pyro per ounce; under your conditions the amount of pyro may somewhat vary. *Make your own test.* And in making your test, do not be satisfied with a mere pretty negative. Let a *print* be the test for contrasts.

MISSES BODINE AND LEWIS

SECOND AMERICAN SALON

A MORNING'S CATCH



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KATHERINE BINGHAM  
THE ANGEL OF THE DARKER DRINK





MRS. WALTER GRIFFIN

THE VELVET GOWN

In timing, the second hand of your watch need never be bothered with. You can sufficiently estimate the quarters by the minute hand.

The foregoing temperatures are to be taken as those of your solutions. If the developing-tray be well rinsed with the developing-water, and the room temperature does not vary more than, say, 15 or 16 degrees from the solution, in the short time of developing, the slight change in temperature will be inappreciable. The foregoing system calls for a timepiece and a thermometer. There may be times, away from home, when a thermometer is not at hand, or where you may have to deal with different developing-agents. What are you then to do? In this case, I make a special exposure for the purpose and develop it per judgment. If I find it right, I develop all of the exposures by its time. If, however, I find it slightly too contrasty, I give less time to the other plates; if too dull and flat, more time. Using this method as a test, one can almost always hit it off right the next time.

The method of development given above is very simple — much easier to carry out than to tell about. It is the most scientific, the easiest and the surest, for both professionals and amateurs.



CLARISSA HOVEY

FAIRY TALES

## ONE WAY OF KEEPING MOUNTED PRINTS FROM CURLING

DAVID GRAY ARCHIBALD

**P** RINTS mounted on any but very heavy, or, in some cases, very large cards in proportion to the print, will draw the card mount into a curved shape as they dry. Often it is not advisable or even possible to use very heavy stock, and often the thin mount will buckle. This is truer of wet mounting than dry; but most mounting is done wet, therefore I shall refer especially to that way when giving my plan. It works either way.

The cause of the curling is the drying out of the water in the prints and consequently of their shrinking. The print in shrinking "pulls" the mount around. If you put them under pressure you prevent the pulling, but how about the print? What happens to it? Nothing, if you put four pieces of cardboard around it, so that the pressure comes at the sides and not on the face of the print.





MARY MULLEN

PORTRAIT

If you are handling a number of regular sizes you can make ready for use at any time a supply of cut-outs of cardboard with the openings of a size large enough to allow the print to be free.

Pile the prints and cut-outs alternately one on top of the other, and place a weight on top of the whole pile. This weight may be a lot of old plates wrapped in paper, or a board can be placed on top of them and weighed down with flat-irons. They can also be placed in a letterpress. It takes a little more time this way, but the results are better.

For thin card stock you should mount a piece of paper or card stock on the back at the same time you mount the print on the face. This will keep the mount flat. Put the paper on wet and paste thoroughly, allowing the paste to soak in well before mounting.

## PHOTOGRAPHING AN ECLIPSE OF THE SUN

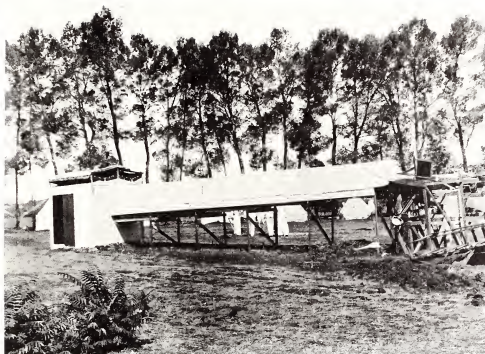
C. H. CLAUDY

*(Illustrated by the Writer)*

IT is an unusual complaint to make of a subject photographic that it is too well lighted. Yet that is exactly the trouble with those parts of the sun which possess the greatest interest to astronomers and physicists,—the corona, the chromosphere, the photosphere, and the solar prominences. These phenomena are completely obscured to human vision and to the camera by the intense light of the sun. If a long exposure is given in photographing the sun, halation hides them; if a short exposure is tried, they have not light enough to impress the plate in the face of the brilliant light of the main body of the sun. So astronomers patiently wait for the moon to get between the sun and the earth and cut off most of the light, when, in the few seconds of total eclipse, they can secure pictures of the wonderful things which happen close to the sun, and study these pictures at their leisure.

Now, eclipses of the sun occur every year, somewhere; but as three fourths of the surface of the earth is water, three fourths of them are visible only from ships at sea. And of the remaining portion of the earth, a large part is too inaccessible, too cold, or too subject to bad weather to make observations a possibility. Consequently it is not more than once in four or five years on an average that eclipse expeditions are fitted up to study the solar phenomena. And if astronomers depended on the eclipse coming to them there would be an average wait of three hundred years and more between observations, since that is approximately the period between eclipse shadow paths covering the same territory.

In times gone by eclipses were studied by visual observations; and as the time was short, human nature prone to excitement under stress, and the personal equation of the observer a terrible factor in error, nothing of absolute value could be depended on. Now, however, with photography for an aid, visual observations are confined mostly to color, and the camera in one form or another takes the place of the human eye. But what cameras they are! Those who see a small black box, with red bellows and some shining metal, when the word is spoken, would never recognize as cameras the peculiar and clumsy instruments used in solar eclipse work. For instance, one camera used by the Naval Observatory party in Puerta Coeli, Spain, during the eclipse of August, 1905, was sixty-five feet long! It hardly needs to be said that it was built on the ground and looked like an overgrown cow shed. "But how," you ask, "if it was horizontal, on the ground, did the sun get into it?" At the lens end is a peculiar piece of apparatus called a *cœlost*at (pronounced see-lo-stat), consisting in the main of a perfectly plain mirror, of optically plane glass, highly silvered, which is mounted on an axis parallel to the axis of the earth and slowly but surely turned by clock-work. The image of the sun is reflected by this mirror through the lens and down the tube of the camera, and as the earth turns one way the



FORTY-FOOT CAMERA USED AT GUELMA, ALGERIA, TO PRODUCE THE ECLIPSE PICTURES  
ON PAGE 179

clock-work turns the mirror the other way, so that the image of the sun, reflected into the camera, remains stationary. This is essential to the work. The exposures range from a part of a second to a minute and a half, and any movement would blur the image, just as it will in the photographic work with which we are all familiar.

Now I am sure you are wondering why a camera should be sixty-five feet long? Purely and solely in order to get a large picture. You know that the longer the focal length of a lens, the larger the image from a given distance. Now we can't get any closer to an eclipse than the surface of the earth, so to increase the size of the pictures we have to increase the focal length of the lens. So in this monster camera, designed by Mr. W. W. Dinwiddie of the Observatory staff, the lens had a focal length of over sixty feet. It was seven and one half inches in diameter. Will the head boy kindly state the *f.* value of the lens? No? Well, it is approximately *f.* 96. Not very fast, judged by hand-camera standards, but quite fast enough, and as fast as it could very well be made, without going to enormous expense; for when lenses get to be eight and ten inches in diameter and made by a great optical firm at special order they begin to cost a lot of money.

Now, as you can very well imagine, setting up this big instrument, adjusting it, and getting it into thorough working order was quite a task. So this, and

the two other big cameras of this expedition, which were at Daroca, Spain, and Guelma, Algeria, were provided with focal plane shutters, and with these pictures of the sun were taken for days before the eclipse, giving very short exposures — a thousandth of a second, or less — and from these photographs, errors could be detected in alignment and focus, as well as if the picture taken was the eclipse itself.

The pictures will show you the construction of the camera from the outside. It was simply a double tube of tar paper and canvas, mounted on frames, and ending in a little house with a movable roof and double doors; for the plates were handled naked, without holders, and held, during exposure, in a permanent frame, an integral part of the camera. Yet as all the work was n't done in the dark, ventilation was needed — hence the open roof.

But you must not imagine that this one type of camera was to do all the eclipse work. It was to take large pictures of the sun, such as are reproduced with this article; but there were many other kinds of cameras, to take smaller pictures. For instance, each station had a fifteen or twelve foot camera, mounted on a large polar axis (see picture), which rotated against the motion of the earth for the same reason and with the same effect as did the *cœlostats*. Then there were spectroscopic cameras, and polariscopic cameras, a chronospectrographic camera, etc., mostly mounted on the same polar axis with the fifteen-foot instrument, but in some cases utilizing the other end of the axis of the *cœlostat* to bear a mirror. Some of these instruments were for making pictures of the eclipse as a whole, with the hope of including the long equatorial streamers of the corona; and the other special instruments, like the plain and concave grating spectrographic cameras, were for the production of spectrum photographs of different portions of the eclipse. But I do not want to weary you with technical details of the astronomical side of the expedition. I am sure you will be more entertained with the means at hand there for development.

Imagine yourself about to develop a lot of plates of all possible lengths of exposure, in a hot and stuffy room, in the tropics, in August, where you had no running water to speak of, and where a failure meant a loss of thousands of dollars in time, trouble, and money. Nervous work, don't you think? It is one of the troubles of the eclipse expeditions — this development; for the plates must not be risked a minute longer in a warm climate than can be helped, nor must they run the chances of breakage in transit due to incomplete packing in the dark. So development is made then and there a necessity. Look at the end of one of the dark rooms, as it is in the picture, — one barrel of water, and when that is gone some one must climb up outside and put in some more. And worst of all, at Guelma, the water was so hard that fixation was almost impossible, the greatest difficulty being experienced in clearing the plate. Recourse was finally had to hypo made with distilled water.

The developer? Old and slow metol-hydroquinon; for what was wanted was detail in the high lights — details in the shadows were just what nobody wanted at all. No one photographs an eclipse with the idea of getting details in



THE ECLIPSE CAMP AT GUELMA, ALGERIA  
DARK ROOM, SHOWING WATER-SUPPLY AND VENTILATING-ROOF



the moon — any moonlight night will suffice for that. And the results? Well, here are four, all from the forty-five foot camera at Guelma, made by Mr. Dinwiddie, who, as mentioned before, designed the camera; incidentally it may be mentioned that he designed almost all the rest of the eclipse instruments and made many of the parts himself. Almost without exception the other photographs were unqualified successes, the spectroscopic results being unusually fine and valuable.

Some one is anxious to ask me the reason for exposures varying from a fraction of a second to a minute and a half, it seeming impossible that such a great range of exposure could be approximately correct in all the plates made. But it must be remembered that in photographing an eclipse what is aimed at is not as perfect a picture of the affair as a whole as could be obtained, but a series of pictures, each one of which shows better than the others some one particular phase of the eclipse. The shortest exposures, therefore, are expected to catch only the brightest part of the corona, close to the sun, and show the solar prominences, as the flames, spouting for thousands of miles into the space about the sun, are called. The longest exposures are to obtain the extreme elongations of the coronal streamers, too faint in light to be recorded with a short exposure. In the long exposures, the inner detail is of course entirely swallowed up in halation and overexposure. The pictures will illustrate this plainly, the one-quarter and the two-seconds plates showing much that the eighty-seconds exposure does not, and it, in its turn, exhibiting the coronal streamers which the first plates do not show at all.

It must not be lost sight of that a great deal is done at an eclipse observatory in a very short time. Eclipses come seldom, last a few minutes at most, and are not infrequently obscured by clouds. Consequently, when astronomers do have a chance at one they make the most of it. Now, machinery cannot be made to work perfectly as soon as it is finished, nor can men be drilled in an hour to do the maximum amount of work in the short period of totality. Consequently, it will surprise no one to hear that these eclipse parties, after setting up and effecting the preliminary adjustments of the apparatus, are drilled in the work as men-of-war-men drill, going through their performances daily, to signals, exactly as they will go through with them the day of the eclipse — even to the point of handling bare plates in the camera, albeit these plates are not coated. The big cameras end in dark rooms, in which the men work, and the plates are handled bare; that is, without being put in a light-tight plate-holder. They are taken from the box, put in place in the end of the tube, the exposure made, plate removed, placed in the box, another plate inserted and exposed, etc., as long as totality lasts. The loss of enough time to make one plate would be a calamity, hence every precaution is taken to make the most of the precious seconds.

In the same way the instruments must be drilled and tuned up until they work perfectly. They have to be adjusted with absolute accuracy, otherwise all the results would be valueless. The observers must be able to know that their instruments are rotated by the clock with as absolute an accuracy as mechan-



INNER CORONA, FLAMES AND PROMINENCES, TWO SECONDS EXPOSURE  
EIGHTY SECONDS EXPOSURE DURING TOTALITY, SHOWING CORONAL STREAMERS AND MARKED ABSENCE OF EQUATORIAL LONG STREAMERS CLOSE TO SUN-SPOT MAXIMUM



INNER CORONA AND LARGE PROMINENCES  
ONE-QUARTER SECOND EXPOSURE TEN SECONDS AFTER TOTALITY, WHEN THE SUN JUST BARELY SHOWED, CORONA AND PROMINENCES STILL DISTINCT





PREPARING THE POLAR AXIS, MOUNTING AND ADJUSTING THE INSTRUMENTS ACCURATELY

ical means will allow, for if the clock of the cœlostæt on the big camera, for instance, failed by so much as a beat in its work, allowed the image of the sun to move even a fraction of an inch on the plate, all the value of that picture would be destroyed, since it could not then be measured and studied with accuracy.

I presume my readers are curious to know the definite results of the expeditions, meaning what has been learned from the work done. But that cannot be told as yet. There is material for study for months, if not years, in the successful eclipse expedition; and while it can be said that the results, being so good photographically, presage much of value to astronomy, it is difficult to put a name to any definite discovery. In all probability the researches in this eclipse will disclose nothing startlingly new — will probably only serve to confirm existing knowledge on the subject of the sun; but, on the other hand, the spectroscopic photographs will undoubtedly add to the store of facts which have been gathered about our principal luminary. The authorities regard the expeditions as highly successful, and well worth the time, trouble, and money expended to get the photographs. It is in a way a triumph for photography that it is able to do so well and so quickly what was in past times a matter of years of waiting, and many eclipses, to produce.





WILFRED A. FRENCH

LUXEMBOURG GARDENS, PARIS

## A PHOTO-ERA TOUR IN EUROPE

(Continued)

### THE RIVIERA DI PONENTE AND PARIS

WILFRED A. FRENCH, PH.D.

**A**LTHOUGH time did not permit us to make the coveted excursion to the justly-celebrated Villa Pallavicini, at Pegli, the wonderfully beautiful grounds of which had taken me captive twelve years before, we obtained an excellent survey of this beauty-spot from the train on the way to Nice. No railway route in Europe affords such a ravishing prospect of land and sea as the journey from Genoa to Nice, along the *Riviera di Ponente*. As on the trip from Pisa to Genoa, two days previously, the sun shed its full radiance upon the curving shore and the Ligurian Sea resplendent in the colors of the prism. All the way to Cannes this favored coast is an unbroken line of health-resorts, and hither flock travelers, the weak and the strong alike, from all parts of the world, notably from Northern Europe and Russia. And yet each has marked physical characteristics, which lend a pleasing variety to the moving panorama. Among the most important Italian pleasure-resorts passed *en route*, and admired in turn, are Savona, Noli, Allassio, Porto Maurizio, San Remo, Ospedaletti, Bordighera and Ventimiglia. Having submitted our luggage to the usual customs inspection, we soon enter French territory and halt at Menton. This popular resort enjoys a peculiarly favorable situation, protected, as it is, from the chilling north winds by a girdle of rocky mountains, and is esteemed an ideal spot for a winter residence on the Riviera, vying, in this re-



WILFRED A. FRENCH

CHURCH OF THE TRINITY, PARIS

spect, with Nice and Cannes. Not far off, to the left, we note the wooded promontory of Cape Martin, after passing which we observe in the distance Monte Carlo and, close beside it, Monaco, jutting out into the sea. A short stop — an exciting moment for those who are familiar with the thrilling stories of wrecked fortunes and disturbed mental repose — and with a sigh of relief we continue on our way to Nice. We glide rapidly along, charmed by the sight of the broad, smooth beaches alive with rolling, transparent surf, and, beyond, the scintillating surface of the vast Mediterranean. While absorbed in contemplating so much enchanting scenery — being most comfortably settled in a swiftly-moving train — we took no heed of the passing hours. Here was nothing to mar, in the slightest degree, the keen sense of enjoyment that was ours. A feeling of unutterable contentment seemed to pervade our little party. We encountered relatively few tunnels on this route, and, in most instances, they imparted a zest to our visual appetite, which gave little hope of being appeased. Villefranche-sur-Mer, fair and bewitching, was passed and only too soon did we reach our journey's end —



WILFRED A. FRENCH  
 PARIS — MONUMENT TO WATTEAU  
 BRIDGE OF ALEXANDER III.  
 PARC MONCEAUX





ANTONIN MERCIÉ, SCULPTOR  
A MEMORIAL, LUXEMBOURG GALLERY, PARIS





WILFRED A. FRENCH      ST. ETIENNE DU MONT, PARIS

Nice, where, again, pleasures, new and rare, awaited us. We took up our abode at the Villa Brice, delightfully situated in the residential section of the city. This *pension* is most admirably conducted by an English couple, and its *cuisine* is unsurpassed. A stay of three days in this, the queen city of the French Riviera, enabled us to obtain an adequate impression of its numerous attractions, which are, in truth, most alluring. Added to the glorious work of nature is the product of human skill and taste. From points of vantage is seen the sumptuous beauty of land and sea, harmoniously blended and enhanced by picturesque architecture and luxuriant exotic vegetation. The *Jardin Public*, adorned with stately palm-trees and cool grottos, forming a combination of rare beauty and taste; the *Casino Municipal*, internally a veritable fairyland and making an irresistible appeal to lovers of art, music and games of chance; the broad and magnificent promenades extending for miles along the shore, and unsurpassed facilities for boating and sailing, show what the municipality of Nice has done for the pleasure of visitors that flock hither from the four winds of heaven. Nice has also

the honor of being the birthplace of four celebrated Italians, viz., Massena, one of Napoleon's marshals; Paganini, the wizard of the violin; Garibaldi, the patriot, and Gambetta, the French statesman. No wonder the patriotic Italian mourns the loss of his beloved *Nizza* as profoundly as does his Gallic neighbor that of Strasburg. Although the season had by no means begun, the city was filled with tourists who, like ourselves, desired to profit by the absence of crowds and — higher prices. The following morning we set out on an excursion along the famous Cornice Road, or the *Route de la Corniche*, now that this charming territory belongs to France, which acquired it with the province of Savoy in 1860. We went in two open carriages, having made an excellent bargain the evening before. The Cornice Road, built by order of Napoleon, traverses the most beautiful portion of the Riviera, i.e., from Nice to Mentone. There are, in reality, two roads, the upper, or *route supérieure* or the *Grande Corniche*, and the lower or *route inférieure*, which hugs the shore. The road ascends amid luxuriant vegetation and affords commanding views of all points along the shore. First we reached Mont Gras, with its famous observatory, followed by Eze, an old village perched high on a steep, isolated rock, resembling so much an ancient stronghold with its venerable walls and frowning castle. As we climbed higher and higher, we were surrounded by natural fastnesses, which, our driver informed us, would render any attempt to capture this part of France abortive. Of whatever character the defences, they certainly were not in evidence, although they might be made to yield their secrets to some daring aeronaut in a modern airship. Still we ascended, reaching, at last, the culminating point of the road,—Turbia, or *La Turbie*, nearly two thousand feet above the sea. It is an ancient village, consisting largely of Roman ruins, and visited by tourists chiefly on account of its view, which is truly magnificent. One can see the mountains and sea-coast to the East and West. Far below lie Monte Carlo and, gracefully outlined against opalescent waters, the headland of Monaco, the two forming the tiny principality of Monaco. From the dining-room of the new hotel, Rhigi d'Hiver, we gazed with rapture upon a superb panorama, while indulging in gastronomic pleasures and accompanied by excellent vocal and orchestral music. If anything could have enhanced the delights of this memorable hour spent at La Turbie, it failed to suggest itself, unless it was the presence of absent friends. Beyond La Turbie the road descends sharply, revealing a fine view of the Riviera di Ponente as far as Bordighera. Finally we came to Roccabruna, or Roquebrune, with its rich lemon and orange-groves. Ten minutes more, an abrupt turn to the right, and we were on the lower Corniche Road, and on the way to Monte Carlo. It was yet too early for the regular season, and the place seemed deserted. After feasting our eyes on the voluptuous beauty of the surroundings and admiring the magnificent casino, designed by Garnier, the architect of the Paris Opera House, we entered the world-renowned gaming-rooms (*salles de jeux*). Our eyes lingered briefly on the sumptuous furnishings and lavish decorations, where cost, seemingly, had not been considered, but were riveted upon the group of persons surrounding the tables, where games were in progress. In



FERNAND CORMON, PINXIT

CAIN, LUXEMBOURG GALLERY, PARIS

a few moments, we, too, became interested in *Trente-et-Quaranté*, each staking, as previously agreed upon, a limit of five francs. All but one of us lost, he gaining twenty francs. Nevertheless, every member of our group took no further part in the game, but simply watched the progress of the sport and noted the expression in the faces of those who won or lost fortunes. We were told by an acquaintance, who retired satisfied with moderate winnings, that successful gaming at these tables was nothing less than a science, and that great gains came only after a long series of losses, which the player must be in a position to weather. We left the place with no regrets, yet marveling at the seductive fairy-like aspect of the place, and the utter uselessness of it all to those who had been suddenly stripped of their wealth. We drove hence to the neighboring promontory, the seat of government. Monaco, including Monte Carlo, is an independent principality, ruled by a prince, has its own, separate money and postage-stamps and is picturesquely situated on a rocky peninsula, whose borders are laved by the waters of the Mediterranean. It is still surrounded by the old fortifications erected in the time of Louis XIV., and flanked with batteries commanding its pretty bay. Contrary to our expectations, no ludicrous military display smacking of *opéra bouffe* met the eye. Instead of pompous, gorgeously-uniformed mercenaries, armed with mediæval weapons, we observed only a double sentry, in a quiet, modern uniform, stationed at the entrance of the palace — itself a modest, unassuming structure. The new cathedral, however, built in the romanesque style, is a magnificent and beautifully-proportioned edifice, and held our attention for a considerable time. At four o'clock we reluctantly said *au revoir* to this seductive locality, and, once more on the lower Corniche Road, we continued our homeward drive in earnest, reaching Nice several hours later and in time for dinner.

At the conclusion of a most delightful repast — never omitting to pay a well-merited tribute to the rare artistry of French cooking — we examined the state of our photographic ammunition, only to find the supply entirely exhausted. The charms of the Corniche Road had claimed every available film. Fortunately the Eastman Kodak Agency in the *Jardin Public* was open till nine o'clock and, what was of vital importance, it carried a stock of fresh films of every size, and our needs were quickly supplied. At Fréjus the railway forsakes the shore, entering an attractive, mountainous country. We did not again behold the sea, until Toulon was reached. Here the mind pictured the young Napoleon winning his first military laurels, by helping to wrest this important naval station from the English. Skirting the shore, we had an excellent opportunity to observe the French Mediterranean fleet manœuvring a short distance away. Our next objective point was Marseilles, the principal seaport and the second city in France. We spent the afternoon visiting *Notre Dame-de-la-Garde*, which occupies a commanding position reached by a gigantic lift (*ascenseur*). Here we obtained a fine view of the immense harbor, the only object of general interest in this great city. The next morning saw us on our way to Lyons. We passed, following the course of the Rhone, a section of France rich in magnificent Roman ruins, most of which, for artistic beauty and excellence of condition, surpass even those of





WILFRED A. FRENCH  
VIEWS IN THE PARK AT NICE



Italy and Asia Minor. Early in the afternoon we entered the magnificent city of Lyons, second only to Paris in industrial importance. The general aspect of the city, with its many imposing architectural features, was revealed to us by an extensive carriage-drive. We also seized a rare opportunity to visit one of the large silk-factories, an experience long to be remembered. Wishing to save time, we continued on to Paris in a "sleeper," but had occasion to rue our temerity. The compartments, with three couches in each, were arranged in parallel rows across the entire width of the car, a door, opening directly out, at each end. The couches were only a few inches apart and were provided with a thin coverlet, but no pillows. The latter we hired at the station shortly before the departure of the train, and for the necessary covering our shawls and traveling-rugs met every requirement. At 10.30 o'clock we lay down to sleep, but our efforts to obtain the coveted rest were interrupted by a noisy demonstration at each door. "*Billets, s'il vous plait.*" To this demand we complied as well as we could, aided by the glare of the lanterns skilfully directed by the zealous officials, and, this ceremony over, bang, bang! went the doors. These polite attentions were repeated several times during our nocturnal journey. The din of passing and shifting trains, as well as innumerable stops and delays, proved anything but soothing to our tired nerves. None of us remembered ever to have passed a more wretched night and, with exclamations of joy, we entered the *Gare de Lyon* at 6.45 A.M. Paris, at last!

If anyone who is accompanying me in spirit on this journey expects me to indulge in a protracted rhapsody on the most magnificent city in the world, he is going to be disappointed. Whatever this wonderful metropolis presents to the lover of the beautiful, — be he a great artist or an obscure student, — to the *littérateur*, to the scientist, is known the world over. The monuments of Paris are household words in every civilized community and rare, indeed, is the person of education who does not know them all by heart. During our stay of five days, we found it difficult to obtain even a fair geographical knowledge of this vast artistic wonderland, and, in order to avoid crowding the mind with a confused mass of impressions, we confined our sight-seeing to relatively few objects, concluding a series of strenuous, but highly successful, efforts with a memorable visit to Versailles. While photography did not necessarily dominate our thoughts, it clamored for recognition whenever a subject possessing the elements of an artistic picture met the eye. And here, where the very air was charged with artistic life, scenes making the strongest possible appeal to our sympathies succeeded each other in such rapid succession, that a deliberate, careful use of the camera was out of the question. The many tempting sights, caught from tops of tram and omnibus, kept the ultra-enthusiasts of our party quite busy, for they expended photographic ammunition with such recklessness as to present a graphic illustration of what might be aptly termed "frenzied photography." The cooler heads preferred to curb their photographic propensities, and to give their undivided attention to the novel and interesting scenes they were privileged to enjoy, finding other opportunities, rare, to be sure, to photograph special subjects with calm judgment and discrimination.



A. WAYLAND CUTTING

POND-LILIES

### A LEGEND OF THE POND-LILY

AGNES LOCKHART HUGHES

AGAINST a mass of purple clouds calm dreamed the slumbering trees,  
 And fireflies gay torches flung across the dew-pearled leas;  
 Lonely, an elderberry-bush knelt by the dimpling pool,  
 While lily-pads with jewelled crowns sailed o'er the waters cool.  
 Then, from the shadows densely dark, where soft the old trees slept,  
 A stripling birch with stealthy tread close to the blue pond crept.  
 There mirrored in its crystal depths he saw a star of night,  
 While diamonds gleamed above her brow and gemmed her gown of white.  
 Entranced, the birch-tree stooped and told the pale star of his love,  
 While like a broken silver ring the moon gazed from above.  
 Then, sudden, dawn shot arrows of scarlet through the skies,  
 And with a little sleepy yawn the starbreaks closed their eyes.  
 But she who on the blue pool shone forgot her far-off home;  
 So night condemned the errant star henceforth on earth to roam.  
 The fairies lifted lily-pads and taught her how to float;  
 Thus, ever since, this blossom fair rides in an emerald boat.  
 A gentle zephyr from the flowers filched their sweet perfume,  
 And scattered it, with dewdrops rife, upon the shimmering bloom.  
 Smiling, a slanting sunbeam danced across the waters cold,  
 And filled the lily's trembling heart with spikes of burnished gold.  
 Now, when the summer winds breathe low, and soft the starpoints die,  
 This blossom lifts her cup of pearl, gold-filled, towards the sky.  
 The birch still leans across the pool, and keeps his faithful tryst,  
 Reflected like a silver shaft where oft the star he kissed.  
 And far outshining all the lights that pierce the dome above,  
 The sweet pond-lily spreads her leaves and shines for him — her love.

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## EDITORIAL DEPARTMENT

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### WOMAN'S NUMBER

THE beautiful pictures which adorn this issue of the PHOTO-ERA demonstrate clearly, if any demonstration were needed, that woman finds her proper sphere in photography. It is a line of work well fitted to every impulse and desire of her nature. There is a certain deftness of touch in posing, a certain fineness of feeling in securing expression, which finds a ready response in sitters when a woman is the operator. With women their desire to look beautiful will always appeal to her feminine inclinations. Her sympathy will win a smile from the most ill-natured child. While even with men the social element is introduced, which drives away the worried look and makes the sitter appear at ease in his picture. All this, of course, assumes that the woman photographer is fitted for her work, as only the highest type of intellectual womanhood, here as elsewhere, will win out and be successful.

We regret that the pages of our magazine are not numerous enough to include the representative work of all the women photographers in the country. But one can glean from the work selected, and the appreciative article of Mr. Hines, a very fair idea of woman's place in photography to-day.

### THE NEW ENGLAND CONVENTION

THE Ninth Annual Convention of the Photographers' Association of New England was held in Boston, Aug. 21-23, 1906. All possible credit is due to the officers, especially to President Johnstone and Secretary Evanoff. The hard work of these two gentlemen resulted in a most successful convention, under what may be termed rather unfavorable conditions. The National Convention at Niagara Falls, which occurred two weeks previously, drew a very great many people from New York State and Canada who otherwise might have attended that of the New England. The attendance was, however, the second largest in its history. It is to be credited with an unusually good exhibition of pictures by its members, and, owing to the energetic efforts of Secretary Evanoff, also the loan of many of the exhibits that were at the National, a circumstance much appreciated by the Association. We fully understand the situation that prompted the officers to offer, this year, one gold, twelve silver, and twenty-eight bronze medals, to be given the exhibitors. We think that the awards, by vote of the members, was an attraction, and that the verdict was a good and just one, since the gold, silver, and many of the bronze medals were awarded upon actual merit of the pictures. But when it came to the point of being obliged to give as many medals as forty-one to so comparatively few exhibitors, it may reasonably be questioned whether the recipients were all justly entitled to the award. A bronze medal calls for honorable mention, which is a *decided distinction*, and should be given only to work of a very high order of merit. Besides, the

officers elected for the coming year are very popular, and this alone assures the success of the next convention.

Mr. J. H. C. Evanoff, the president-elect, is one of New England's best photographers, an indefatigable worker, and possessed of the loftiest ideas as to his policy, which, we feel assured, will be fully equal to the best of former administrations. He will be cordially supported by Mr. W. E. Marshall, the new first vice-president, who, although new in Association work, is also one of our ablest artists; by Mr. George H. Hastings, the new secretary, a former president of the national body and a man of large personal popularity; and by Mr. S. M. Holman, re-elected for the seventh time as treasurer. Mr. Thomas Harrison Cummings repeated, in two sections, his Niagara Falls address on the first and second days. The greatest amount of interest was displayed in this discourse, as reports of its great reception at the National Convention had reached Boston, the lecturer being greeted most cordially on both days. The New England members thus received a very comprehensive idea of the movement, now on foot, looking towards the establishment of a National Academy of Photography, and which is to be taken up by the National body.

Mr. Alon Bement lectured very ably on the subject of "Composition," while his criticism of pictures, delivered both from the stage and in the exhibition-hall, were highly illuminating. Mr. H. A. Collings delivered a very timely address on business matters, dilating especially on the ethical side of the photographer's relations with his patrons and the public generally. Mr. Hearn, the president of the Photographers' Association of America, paid a tribute to the able effort of the president and secretary, which had come before his notice, and commented upon the interesting features of the prize question which was being worked out at this convention.

## NATIONAL CONVENTION

THE Twenty-sixth Annual Convention of the Photographers' Association of America was held at Niagara Falls, New York, August 7-10 inclusive. Under the guidance of Pres. Chas. W. Hearn, of Boston, the deliberations were very successful. The addresses were pitched upon a high plane, and the discussions were exceedingly practical and useful. The address of Mr. W. I. Scandlin on "Business Methods" was a masterly talk on the practical side of the profession, which will long be remembered by those who heard it. F. Dundas Todd's paper on "The Cost of Manufacturing in a Photographic Studio" was a searching analysis of the conditions that confront the average professional to-day, with the financial side figured down to a nicety. No doubt the exchange of views and the discussion which it provoked will be of lasting value to those who participated and heard it. Owing perhaps to the poor setting, the impression of the picture exhibit was hardly up to the standard set in previous years. One looked in vain for the long-promised professional masterpiece that would revolutionize portraiture and mark an epoch in the progress of photography. The beautiful Indian pictures by Curtis, the handsome series

of portraits by Dührkoop, of Hamburg, in the Second American Photographic Salon, attracted much attention, and deservedly so. The high standard of excellence shown in these special exhibits was a fruitful theme of conversation during the convention. There was but one address devoted to the art side of photography, the subject being "Professional Portraiture in the United States and the National Academy of Photography," by Thomas Harrison Cummings. On the whole, we believe this convention to be one of the most valuable from the practical standpoint ever held by the association. The election of C. J. Van Deventer, of Decatur, Ill., gives much promise of the continuation of the good work in the future.

## NATIONAL ACADEMY OF PHOTOGRAPHY

THE subject of a National Academy of Photography as presented to the Niagara Falls convention at the instance of President Hearn was a new idea that proved very popular. The object is to gather together the brightest minds in the profession and through this organized force to shape public opinion where it touches upon photographic interests. The immediate purpose will be to secure recognition for photography as a fine art. In view of the fact that the learned and artistic bodies of the old world have accepted photography as one of the graphic arts without equivocation or reserve, it is up to the American photographer to make a stand for similar recognition in this country. While we do not claim for our medium an equality with painting in the matter of artistic expression, we do insist that photography is being exploited more successfully of late years as a medium of art expression than some of the older mediums. Many pictures are hung in photographic exhibits that represent real art—sincere, vital, personal art. Though fettered with technical difficulties still, when photography goes back to the fundamental rules of design and beauty is the result, the man who does this is an artist, even though his recognition as such may be delayed. When the creative imagination enters with design into any art that art is a fine art by universal consent. A picture that is carefully planned and thought out, just as a symphony or a poem or a house might be planned to produce beauty, deserves to be recognized at its true value and worth, and photography will soon come into the possession of its own. In January of this year a National Academy of Design of New York and the Society of American Artists were united by a formal vote of both bodies into a National Academy of Art; their proposition is to include painters, sculptors, architects, and engravers only, as eligible to the honors of the academy. We think the addition of the word "photographer" would have honored the academy and would have strengthened its influence with those who are honestly looking for the manifestation of art in any form. In the absence of any disposition on the part of the academy to recognize photography, the photographers themselves will agitate the question and continue to agitate it on the ground that no question is ever settled unless settled right. A committee has been appointed by the National Photographers' Association of America, with full power to take the matter under advisement.

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## THE ROUND ROBIN GUILD

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*Conducted by Elizabeth Flint Wade. Specially designed for the amateur photographer and the beginner. Membership may be obtained by sending name and address to the PHOTO-ERA.*

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FIRST PRIZE — GARDEN SCENES

WM. S. RICE

A SUBJECT which ought to appeal to every member of the Historic Picture Guild and incite him to the active making of the pictures is that of historic old churches. Alas, so few remain that the collection, if complete, would be small, for many are destroyed, and most of those that remain are rapidly falling to decay.

This summer while taking a driving-tour through New York State — not an automobile rush, which resembles nothing so much as that wild ride of Phaeton, but a leisurely journey with a horse that feared neither auto nor steam-engine, and only asked opportunity to give the former a wide berth when it shot past enveloped in

clouds of dust — taking this delightful pilgrimage where the object was not to see how soon one could get somewhere and away from it to the next place, I came to Meeting-house Green, on which stands the old Congregational Church where the father of Robert Ingersoll used to preach.

Priest Ingersoll was a man of such broad views as to frequently cause dissension between himself and his parish. The church where he ministered to a devout and faithful people is crumbling to the dust, the little village is grass-grown and almost deserted, and the old burying-ground, where, with solemn step and slow,

they carried one after another of those of their number who had bid good-by to all earthly scenes, is overgrown with weeds and brambles.

Later in the day I sat by the old fireplace in an historic house where, when the hearth-fires burned bright, Priest Ingersoll and his colleagues met and held many a spirited controversy, and I saw the very mug — so large it ought to be dignified by the name of pitcher or tankard — in which the cider was mulled, then kept warm on the hearth, and from which, before they separated, all drank, and which served as the pipe of peace.

Of course my camera was with me, and I photographed the old church and also the old schoolhouse, the latter being the building in which Robert Ingersoll had his first essay at learning.

The Guild should and must possess pictures of all our historic churches that are extant, and will not each member make a special effort to contribute his quota to our collection?

Among the pictures of historic trees which came to the Guild in answer to the call for them were three views of a historic tree, the pictures of which were made by Mr. H. E. Morrison, Orford, N. H. This tree, writes Mr. Morrison, was planted to commemorate the surrender of Burgoyne. Two years ago last January one third of this sturdy oak blew down, and last winter one half of what remained standing fell, and this spring it was found necessary to cut down the remaining portion. The stump is fifteen feet in circumference. Mr. Morrison enclosed with his letter four prints of this tree; and though the tree itself is no longer standing, we still have its picture. Will not others of our members who live near some famous old tree endeavor to procure its picture before it falls to the ground?

#### DARK-ROOM LANTERNS

There are lanterns, and lanterns, and more lanterns designed for use in the dark room, but unless one can afford one of the better class it is wiser to manufacture one's own. Most of the lanterns are made for

use with kerosene, but with the cheaper grades there is always more or less of a disagreeable odor and the annoyance of a greasy lantern. The trouble with the small lantern used with kerosene is that the confined air becomes heated, the oil loses its density and oozes out and greases the lantern. If one must use a cheap lantern, it will be found much more agreeable to remove the lamp and substitute in its place a candle and candlestick. The camping or soldier's candlestick is just the thing for a dark-room lantern. It is of brass, is only two inches high, and costs but 15 cents. Use adamantine candles. They last twice as long, and do not melt and run, as does the ordinary candle.

In the lighting of the dark room, or rather the darkening of it, there is a great deal of latitude. The beginner is so impressed with the fact that actinic light spoils his plate that he covers every crack, so that not a ray may creep into the room. Now if the sensitive plate is kept in the red rays from the lamp, diffused light in the room will not do the slightest harm to his plate. Then if he provides himself with two or three light wooden covers a little larger than his trays the plate can be covered until development is well out, when there will be no danger of fog. Cigar-box covers make convenient covers, with a tiny knob screwed on for a handle. These covers will be found a very handy adjunct to the dark room, for if development is slow the tray may be covered and left to work out its destiny.

A wooden starch-box makes a good foundation for a lantern. Bore holes in one end for ventilation and shut off the rays of light which come from it by using a round pasteboard box with notches cut in the edges. In the bottom of the box cut the opening for the light and cover with red fabric, or have a ruby glass fitted in. The box thus converted answers every purpose of the more expensive affairs at a minimum of expense. Use the candlestick and adamantine candles mentioned, and one has a lantern which will neither heat the dark room nor annoy one with disagreeable odors.



#### ROUND ROBIN GUILD COMPETITIONS

First prize: Value \$10.00.

Second prize: Value \$5.00.

Third prize: Value \$2.50.

Prizes may be chosen by the winner, and will be awarded in photographic books or magazines published or advertised by us; in enlargements, art portfolios of photogravures, mounts, or other photographic materials advertised by us; or, if preferred, we will send any article of a photographic or art nature which can be bought in Boston for the amount of the prize won.

#### RULES

Membership in The Round Robin Guild, with all its benefits — among which the correspondence privilege probably stands first — is free to all, and we invite every photographer to become a member. Entrance in the monthly competitions is also free to all, whether subscribers to PHOTO-ERA or not.

#### SUBJECTS FOR COMPETITION

August. — "High Speed Photography." Closes September 30.

September. — "Flower Studies." Closes October 31.

#### AWARDS — GARDEN SCENES

First prize: Wm. S. Rice.

Second prize: J. H. Field.

Third prize: Robert E. Weeks.

Honorable Mention: Miss Julia H. Elton, Jessie B. Dixon.

#### MAKING AN ENLARGED NEGATIVE

The tiny negatives made with a pocket camera, though often excellent in detail and well chosen as to subject, are on so small a scale as to be of no pictorial value except as a picture memory record. One may, however, make from one of these miniature negatives enlarged negatives from which prints can be made as interesting as though the negative itself was the original instead of being an enlargement.

The process necessitates a little more work than the making of an enlargement on paper, but the principle is the same.

First, one must make by contact printing on a film or plate a good positive. Lantern-slide plates answer the purpose as well as any, if not better than any other medium.

This small positive is placed in the enlarging camera and from it is made the large negative. If the enlargement is to be 8 x 10 or 6½ x 8½, use an 8 x 10 plate coated with a very slow emulsion. After adjusting the camera and getting the correct focus, make a print on a piece of bromide paper in order to judge of the length of exposure. Then place the sensitive plate in position and make the exposure.

Develop the plate in a solution which will bring out the detail well.

Often one gets from an enlarged negative a more artistic effect than is obtained by direct exposure in the camera.

Directions for making enlargements have been given in the PHOTO-ERA, and the amateur who is not familiar with the operation is referred to the article.

#### SODIUM COMPOUNDS

Sodium compounds play an important part in the chemical processes of photography. Sodium hyposulphite is the one which is used the most lavishly and which is our solvent for the unused silver salts in plate or print. When a print is placed in a solution of hyposulphite of soda a new compound is found, — silver sodium hyposulphite. This double salt dissolves very quickly in water and is easily washed out of the gelatine. In case the solution of hyposulphite is not strong enough to form this double salt, it produces another compound which is insoluble and cannot be washed out of the film or paper. This compound decomposes by degrees, and in time produces a yellowish brown deposit, which ruins paper or film. This is the reason why prints turn a dull yellowish color. By experiment it is found that each atom of nitrate of silver requires three atoms of hyposulphite of soda to form this double soluble salt.

Sodium hyposulphite does not keep well in solution, and should be made up fresh, though a small lump of chalk dropped in

the hypo bottle will neutralize the acid and act as a preservative.

Sodium hyposulphite will penetrate glass or porcelain in a few days, and therefore contaminates any solution which is placed in a vessel which has once been used for a hypo receptacle.

When Herschel first discovered that sodium hyposulphite was a solvent for chloride of silver the price was one guinea per pound.

The abbreviation "hypo" has been so long used that when we meet this chemical under its more dignified names we sometimes fail to recognize it. Sodium hyposulphite, sodium thiosulphite, hyposulphite of soda, and hypo soda are used to mean our plain "hypo."

Sodium sulphite is a sodium used in the developing solutions for preserving the active agent and preventing it from oxidizing.

Pyro, for instance, has a great affinity for oxygen, and on being exposed to the air turns yellow and passes quickly through the stages of discoloration until it is black, in which state it is useless as a developer. The sulphite of soda has also an affinity for oxygen, and the quantity used in the developer being much in excess of the developing chemical absorbs the oxygen and preserves the pyro, metol, hydroquinone, eikonogen, or whatever developing chemical is used.

Sodium sulphite is also used to restore the color to negatives which have been bleached by intensification with bichloride of mercury.

In the toning bath the different compounds of sodium used in neutralizing the solutions affect the color of the print very materially.

Sodium bicarbonate (borax) produces beautiful sepia tones, and is a specially desirable sodium to use in the toning solution of matt surface papers.

Sodium carbonate will render warm brown tones, which vary in depth the longer or shorter time the print is left in the solution.

Sodium bicarbonate gives purplish blacks, and for some pictures this is a very pleasing tone.

Sodium acetate clears up the whites and gives a brilliant print. This soda must always be added to the bath an hour or two before using.

With one or two exceptions, all baths in which gold is used should be made up twenty-four hours before using to allow them time to "ripen," this being the photographic term for the period of rest required to allow the different ingredients of the bath to become assimilated and act readily and evenly on the paper.

Sodium chloride — common salt — is used in the preparation of silver printing papers, and is also an active agent in precipitating the chloride of silver from the washing-waters. It is used as an accelerator in alkali developers, and in a silver bath which has become discolored a handful of salt thrown in and allowed to stand will clear the bath.

#### ANSWERS TO CORRESPONDENTS

GILMER W.—The picture which you submitted in the Guild contest, "Reflections," was an excellent one, and just came short of being a prize winner. Hope to see more of your work at an early date. Photography has many surprises, the least of them being enjoyable, and it has so many possibilities and adaptabilities that it is no wonder the craft has so many followers.

G. L. KERNS.—To remove old silver stains from negatives, soak first in a solution of potassium iodide, using the chemical twenty grains to the ounce. It should remain at least fifteen minutes in this, then washed and transferred to a solution of cyanide of potassium,—thirty grains to the ounce. Handle with a plate lifter, and if the stain does not disappear after a reasonable time, rub the film very gently with a piece of surgeon's cotton tied to a stick. If the stains are very old or very pronounced, use the solution of double the strength.

B. N. S.—The lead intensifier about which you ask is probably made of nitrate of lead and ferricyanide of potassium. Use equal parts of a ten per cent solution of the two chemicals, and add a few drops of acetic acid to the mixture.

# The Crucible

## SODIUM SULPHITE AND CARBONATE

In order to insure uniform strength, all solutions of sulphite or of the alkalis should be tested with the hydrometer, as they are the ones which vary in strength and condition. Suppose we make a solution of sodium sulphite crystals, 3 oz. of crystals to 16 oz. of water, we get a solution of a certain strength. We may not, however, get a solution of the same strength at another time, although it is prepared the same as the first. Its strength may be greater or less, according to the purity of the salt used. If we test the first solution, noting that it tests 45, and then the second, which tests only 40, we see at once that the second lot of sulphite was not of so good quality as the first, and we add more until the solution tests 45, when we know that the two solutions are of equal strength. The following tables may be of use in preparing solutions of both carbonate and sulphite. The test numbers given are those usually obtained with crystals of ordinary purity.

### Sodium Sulphite

1 oz. pure crystals to 16 oz. water tests.	15
2 " " " " " "	30
3 " " " " " "	45
4 " " " " " "	60
5 " " " " " "	75
6 " " " " " "	90

### Sodium Carbonate

1 oz. pure crystals to 16 oz. water tests.	10
2 " " " " " "	20
3 " " " " " "	30
4 " " " " " "	40
5 " " " " " "	50
6 " " " " " "	60

## REMOVING GLASS STOPPERS

Glass stoppers sometimes occasion even more difficulty than corks in their removal. An almost infallible cure for a fixed stopper is to grasp the bottle in the left hand, and with the thumb press against the offending stopper, while with the right hand gently tap against this pressure, using the

handle of a knife or other hard instrument. In this way gradually work round the stopper, which will quickly become loose enough to be extracted.—*Nemo.*

## OVEREXPOSURE AND HALATION

Overexposure in the camera produces a kind of light fog which may be uniform all over the negative or appear as local fog in the form of halation around the window of an interior view. Plates which have been overexposed or accidentally fogged may be restored and used as slow plates for time pictures. A solution for restoring plates is as follows:

Chromic Acid	15 grains
Potassium bromid	30 "
Water	5 oz.

Each plate should be allowed to remain fifteen minutes in this solution, and then washed and dried. All this must, of course, be done under red light in a dark room. Plates so treated will require double exposure when used.

Slight halation and other kinds of local fog can often be removed by rubbing with a piece of chamois dipped in alcohol. A clean place should be used as fast as the chamois becomes blackened. Where the fog is too dense for this treatment, the following solution will be found of use:

### No. 1

Saturated solution red prussiate of potash.

### No. 2

Hypo.	$\frac{1}{2}$ oz.
Water	4 "

Take one dram of No. 1 and two drams of No. 2. Apply this quickly and evenly to the fogged spot with a small brush, and rinse at once. Repeat until the reduction is sufficient.

# The Filter

## HUMOR OF THE LAW

Few admirers of the writings of Thomas Nelson Page, the author of "Mars Chan," "Red Rock," and "Gordon Keith," know that the famous Southern writer began his career as a lawyer.

Mr. Page confesses that he was not a success at the law, but his experiences around the old court house gave him material for many of his most popular stories. One story that he relates with great relish is of an experience he had with an old negro client soon after he hung out his shingle. The old man had known Mr. Page all his life, and, becoming involved in a controversy regarding a small piece of property he owned, rode into Hanover Court House and asked Mr. Page to take his case.

They went before the county court, and the case was decided against them. After the decision had been handed down, Mr. Page went over to where the old man was sitting in the court room. "Uncle Jim," as he was called, was greatly disgruntled at the outcome of the trial, and Mr. Page sought to soothe him.

"Now, Uncle Jim," he said, "we lost this case, but if you have got any more money we can appeal to a higher court and win it."

"'Cose I ain't got no mo' money, Marse Tom," was the old darkey's reply. "Ef I'd a-had any money wurth talkin' about I'd got a good lawyer in de fust place."—*New York Times*.

## SOLDERING

Casey.—"Ye're a har-rd worruker, Dooley. How many hods o' morthor have yez carried up that laddher th' day?"

Dooley.—"Whist, man—I'm foolin' th' boss. I've carried this same hodful up an' down all day, an' he thinks I'm worrukin'!"—*Cleveland Leader*.

## PLEASANTRIES

"Translate, please!" said the teacher. And the scholar, with his French reader, began slowly and painfully, "'*L'anglais avait son sang-froid habituel*.'"—"The Englishman had his usual bloody cold."—*Exchange*.

## SCANDALOUS

"Do you care for *paté de foie-gras*, Mrs. Newscads?" "No, ma'am! and I would n't have his works in my house. I think these French authors is just scandalous."—*Exchange*.

## ALL THE SAME

She was rather proud of her somewhat limited knowledge of the French language, and fond of airing it. She went to secure places on a diligence for one of the Swiss mountain trips, and, approaching the conductor, demanded:

"*Estes-vous les diligence?*"

"*Non, Madame, pardon; je suis le conducteur.*"

Lady, somewhat angry at the correction, excitedly.—"*C'est tout de même; je prendrai deux places dans votre intérieur.*"—*A Bundle of Letters*.

## COMFORTING WORDS

The bishop thought the capful of wind was an Atlantic storm, and worried the captain by asking constantly if there was danger. The captain led his lordship to the hatch over the fo'cs'le. "You hear the crew swearing," he said. "Do you think those men would use such oaths if there was danger of their meeting death?" The sun set in an angry storm-torn sky, the wind rose higher yet, and the good steamer pitched and rolled and groaned and creaked. It was midnight, and a portly figure crept forward to the fo'cs'le hatch. "Thank heaven," murmured the bishop, "those men are swearing yet."—*New York Mercury*.

## NOTES AND NEWS

### THIRD AMERICAN SALON

THE Third American Photographic Salon will be held in 1906 and 1907 in New York, Philadelphia, Washington, Pittsburg, Chicago, San Francisco, Minneapolis, Providence, and Toronto. American work must be framed, and should be sent to local juries before Oct. 30, 1906, as follows:

For District of Columbia, Delaware, Maryland, and all South Atlantic States — To Charles E. Fairman, Capital Camera Club, Washington, D. C.

For Vermont, New Hampshire, Rhode Island, and Massachusetts — To Wendell G. Corthell, Boston Camera Club, 50 Bromfield St., Boston, Mass.

For Ohio — To E. G. Fountain, Cleveland Camera Club, Cleveland, O.

For Canada — To J. P. Hodgins, Toronto Camera Club, Forum Building, Toronto, Canada.

For Maine — To S. S. Skolfield, Portland Camera Club, Portland, Me.

For Illinois, Indiana, Michigan, Wisconsin, Iowa, Kentucky, and Southern States — To Robert E. Weeks, Chicago Camera Club, Chicago, Ill.

For Minnesota — To Louis Fleckenstein, Faribault, Minn.

For Kansas and Colorado — To Thomas A. Morgan, Denver Photographic Society, Denver, Col.

For California, Washington State, and Oregon — To Fayette J. Clute, care *Camera Craft*, San Francisco, Cal.

For New York and New Jersey — To Wm. H. Zerbe, Jr., 345 Spruce St., Richmond Hill, N. Y.

For Pennsylvania and all districts not named — To Pen, Pencil, and Camera Club, 510 Smithfield St., Pittsburg, Penn.

The work of those who have exhibited at previous important Salons need not be submitted to the district juries, but should be sent to the nearest Federation Camera Club, and included in their shipment.

Any exhibitor *may* send direct to the National Jury, care Pen, Pencil, and Camera Club, 510 Smithfield St., Pittsburg, Penn.

Work *returned* by the local jury *may* be sent to the National Jury by the exhibitor himself, if he so elects, and *will receive full consideration*. A National Preliminary Jury, consisting of twenty-three well-known photographers, will select about one thousand frames from the work sent to Pittsburg, and the final jury will consist of six painters of national reputation.

All persons intending to submit work are requested to communicate at once with the Secretary of the Federation, Paul H. Reilly, 46 Lombard St., 6th Ward, Pittsburg, Penn., asking for a copy of the rules and conditions.

The Annual Print Exhibit of the Oregon Camera Club will be held in the new building of

the Portland Art Association during Thanksgiving week of this year. This exhibit will be more largely attended and will represent more workers than any previous exhibit of the club. The Oregon Camera Club has 125 members, who are active and enthusiastic workers, and takes the lead in things photographic in the Northwest.

The Second Annual Photographic Exhibition of the Photographic Section of the Academy of Science and Art of Pittsburg will be held during November, 1906. Pictures will be accepted in two classes; namely, Pictorial and General.

All work entered for the Pictorial Class will be judged by a jury of painters.

The General Class will comprise examples of work shown for its technical qualities, photographs by artificial light, photography as applied to industrial and educational purposes, historical record work, etc.

This exhibition will be open to all photographic workers, and a prospectus and entry form can be had on application to the Secretary, J. M. Conner, Shetland and Finley Avenues, Pittsburg, Penn.

Announcements have been issued for the Fifty-first Annual Exhibition of the Royal Photographic Society of Great Britain, to be held at the New Gallery, London, from Sept. 20 to Oct. 27, 1906. Entry blanks and copies of the regulations may be had from J. McIntosh, Secretary, 66 Russell Square, London, W. C.

"Piccolo" is the name of one of the most ingenious and valuable devices for the camerist known at the present time. This novelty is a sort of pocket tripod; a simple means for attaching a folding camera quickly to a lamp-post, tree, telegraph-pole, fence, column, railing, table, chair, bicycle, rock, or any similar object. Its weight is a little over eight ounces, and the price is 5 Reichs-marks (\$1.25), including a neat carrying-case. Further particulars may be had of the maker, Otto Spitzer, Berlin W. 30, Germany.

Our readers will doubtless be pleased with the series of pictures by that eminent illustrator, Miss Zaida Ben Yusuf, which appears in the present issue of the PHOTO-ERA. These photographs depict, truthfully and artistically, the character of Capri, that wonderfully attractive island in the Bay of Naples. Miss Yusuf passed considerable time there not long ago, exploring its mountains, rocks, and grottoes, and made a large number of highly successful pictures, for which purpose she used a No. 5 folding Kodak fitted with a Goerz lens.

"Around the World in Ninety Days" is a book of travels from the pen of Frederick Chamberlin and copiously illustrated with photographs taken by the author. The volume very properly

devotes most of its space to a description of Hawaii, the Philippines, Japan, and China, countries which seem to have appealed to the author's sympathy with special force, for he chronicles his experiences in a manner strikingly fluent, graphic, and attractive. The description of his interview with Aguinaldo, the quondam Filipino chief, is of peculiar interest. Mr. Chamberlin's style is direct and clear, breezy and terse — a refreshing change from ordinary books of travel. The numerous excellent illustrations accompanying the text attest the industry and success of Mr. Chamberlin as a photographer, proving the value of an efficient camera as part of a tourist's equipment. (Published by the C. M. Clark Publishing Company, inc., Boston, Mass.)

## THE NEW ENGLAND CONVENTION

### DISPLAY OF APPARATUS AND SUPPLIES

THE manufacturers and dealers contributed the usual display of apparatus and accessories — considered by many the most important feature of a photographers' convention. From the beginning it has been regarded as the backbone of these gatherings, national or state, and rightly so. In this instance the exhibition of photographic supplies was an excellent one, and improved, up-to-date tools and methods very much in evidence.

The Robey-French Co., under the personal supervision of Mr. H. D. Haight and an able corps of assistants, occupied about one third of available floor and wall space with cameras, lenses, backgrounds, studio furniture, and other accessories, assiduously demonstrating their character and use.

The Eastman Kodak Co. was on hand with its Aristo School, disseminating practical and useful knowledge about printing and toning. The heads of the company's other numerous departments were present, ready to give the latest and best information in regard to its various products, including cameras, papers, dry-plates, and other specialties.

The Pinkham & Smith Co. displayed photographic as well as optical goods of a large and pleasing variety, under the personal supervision of Mr. Smith and Scovill.

The Anthony & Scovill Co. showed a large and complete line of cameras, studio outfits, all of the latest styles. They were all new goods, in mission as well as in dark oak finish. The entire exhibit was in charge of the veteran J. Benjamin Pelgrift.

C. W. Shepard, dealer in photographic supplies, new and second-hand, was personally in attendance at his desk.

The Sprague & Hathaway Co., manufacturers, exhibited a fine line of high grade and artistic portrait-frames, in charge of Mr. A. H. Paul. Messrs. Hathaway, Wallis and Woodward, the members of the firm, were also in attendance.

Willis & Clements, manufacturers of the Platinotype Paper, were ably represented by Mr. M. B. Schwab, who was provided with an admirable collection of Platinotype prints. Their new paper, "Japine," attracted considerable attention.

The "Angelo Sepia Platinum Paper," a new division of the Eastman Kodak Co., was conspicuously represented by a large mural display, an art show in itself. It was in personal charge of the energetic Jas. D. Nunzio and three aids.

The Artura Photo-Paper Co. was represented by Mr. Ackermann, who made plain the merits of the Artura Iris Paper, made in several popular tints.

The Defender Photo-Supply Co. had an interesting exhibit demonstrating the excellences of its printing-papers, as particularly set forth in several superb views of Niagara Falls by Curtis. The firm was represented by Messrs. L. D. Brown, M. A. Daily and R. L. Ennis.

The Bausch & Lomb Optical Co. showed samples of every lens of their manufacture, and fulfilling every known photographic need. Photographs, illustrating the well-known virtues of this firm's product, were a pleasing feature of the exhibit. Mr. S. Lawrence was in charge.

The Voigtlaender & Son Optical Co., represented by Mr. John L. Yatman, successfully held the attention of all interested in studio and landscape photography. The "Collinear" is manifestly a tremendous force in photographic optics.

The C. P. Goerz Optical Works had a unique and effective exhibit, Double Anastigmats in show-cases and convincing photographic proofs on the walls of their enclosure. The most conspicuous object was the famous Goerz Trophy, a large solid silver cup, won this year by Garo of Boston. The firm was represented by Mr. O. Goerz, Mr. O. Chouinard and Mr. A. K. Bour-sault.

J. H. Dallmeyer, Ltd., represented by Mr. F. G. Burgess, displayed a case of lenses and a fine collection of prints. Evidently the Dallmeyer Portrait-Objective still has a strong hold on the affections of eminent portraitists.

The Cramer Dry-Plate Co., always on deck, was busy distributing samples of plates and Acetone, duly appreciated by the friends of "Papa Cramer," whose friends are legion.

The Hammer Dry-Plate Co., not to be outdone, gave away a limited number of extremely pretty Hammer scarf-pins.

Among the manufacturers of mounts were the A. M. Collins Mfg. Co., with a complete display of its specialties, in charge of Mr. H. A. Stone; the Bridges Mfg. Co., Mr. T. E. Selemcan acting for the firm; and Taprell, Loomis & Co., whose effective exhibit was in charge of Mr. W. A. Taprell. Backgrounds, as usual, were a prominent feature. Packard Brothers, whose exhaustive display was cared for by the hustling Mr. Packard, had a competitor in the Rough &

## NOTES AND NEWS

Caldwell Co. An interesting collection of pastels and miniatures was shown by Mr. J. M. Strock, and C. F. Little was on hand with a first-rate embossing-press. The Wollensack Optical Co. and A. J. Lloyd & Co. were also represented.

From Tennant & Ward, 287 Fourth Avenue, New York, we have received a copy of the new Classified List of American and English Photographic Books in print Aug. 1, 1906. As the only list of its kind, it should interest every photographer.

The Eastman Kodak Company announces the purchase of the Angelo Sepia Platinum Paper, cold development, formerly owned by Mr. Jos. Di Nunzio of Boston. The Di Nunzio paper has by merit alone made a place for itself in the photographic market, and is justly popular with a large number of photographers.

From the Joseph Dixon Crucible Company, Jersey City, N. J., we recently received a copy of their latest publication, "Through Frisco's Furnace." The booklet is finely made up and well printed, and the seven half-tone illustrations are unquestionably the best views that have been shown of modern steel-frame constructed buildings at San Francisco that withstood the earthquake and fire of April 18, 1906.

Although the purpose of the publication is to show how well Dixon's Silica-Graphite paint preserves the maximum strength of steel work of high buildings, so that severe strains can be successfully resisted, yet at the same time it tells, in an interesting manner, of the originality of the American architect and engineer, and of the soundness of their steel-constructed buildings under the crucial test of the earthquake, dynamiting and fire.

### AUTOTYPE TRICHROME TISSUES

The brief general principle of this process is as follows: negatives of colored objects are taken on color-sensitive or orthochromatic plates, which are used with light filters or screens by known methods. The negatives are printed on carbon tissues of suitable red, blue and yellow pigments. The resulting images are then developed and superimposed on one support.

To those familiar with the working of double transfer carbon the process now described will present little difficulty. The tissues, yellow, red and blue, are sensitized, dried and printed in the ordinary way, the negatives being provided with safe edges.

The exposure differs somewhat from the ordinary carbon printing, and as the negatives are usually very thin the exposure is rapid. In our experience we have found the following to be the approximate ratio of exposure: blue, 2; red, 3; and yellow, 8.

After exposure the prints are squeezed on special semi-transparent temporary support and

developed in water of about 95° to 100° F. After development the prints are rinsed in cold water and hung up to dry.

The most suitable support of the final transfer of the prints has from experience been found to be ordinary single transfer paper. The pieces of this it is intended to use should be placed in cold water for about half an hour and then immediately before use into hot water about 150° F. for about a quarter of an hour. When ready, take a sheet of this paper and place in a dish of cold water and immerse the yellow print at the same time. Place the yellow print face to face with the transfer paper under water, lift both out together, and hang up to dry. It is not necessary to use a squeegee. When the print has become dry, raise the support at one corner with a pin or sharp knife, and then run a paper-knife between the two to separate them. The yellow print having been successfully transferred, the next step is taken with the red one.

Before attempting to transfer the red print it is necessary to remove from the yellow print every trace of the waxing solution. This is done by rubbing the print over with a piece of rag wetted with benzole and a little tripoli or whiting. Both the red and blue prints are transferred in the same manner, but a transfer solution is required to insure adherence.

The yellow print, resting on its final support, is immersed in clean cold water, and when flat is laid in the transfer solution, face upwards; soak the red print in cold water, and place that also in the solution, face downwards upon the yellow print, avoiding air-bells. Lift both out together and lay them upon a sheet of glass. The semi-transparent nature of the temporary support allows prints to be easily examined by transmitted light, and the registration of the superimposed images is easily effected. The images resting on the glass are stood on one side to drain, the two being then detached from the glass and hung up to dry.

The transfer of the third, or blue, print is accomplished in exactly the same manner, including the treatment with benzole, etc. No alum or other hardening substance should be used until the final print has been transferred, then the compound picture may be placed in a very weak solution of formaline.

Absolute accuracy of registration is facilitated by placing on the negatives at diagonal points two tiny black dots, which will appear white in the resulting prints. These white spots are pierced with a needle on the dry prints and brought together during the transfers. If they fit together accurately it may be assumed that the registration is correct.

*Transfer Solution:* Nelson's No. 1 cut gelatine, 1 oz. to 60 oz. of water, and strain. Temperature for use, between 70° and 80° F., but not above.

George Murphy, Inc., Trade Agents, 57 East Ninth St., New York City.

## NOTES AND NEWS

### THE NATIONAL CONVENTION

#### DISPLAYS OF MANUFACTURERS AND DEALERS

The displays of manufacturers and dealers were as much in evidence this year as ever, and proved to be both interesting and instructive, many new instruments and preparations being shown, as well as those the long standing reputation of which has made them staple articles in the photographic trade.

Willis & Clements, represented by Messrs. Dietrich, Brackett and Schwab, showed their Japine Platinotype paper, which is made in both matt and glazed surfaces, and bids fair to be a great success, owing to the simplicity of manipulation. The new product attracted much favorable attention, as did the new storage tube for keeping it absolutely air-proof.

Under the personal direction of Mr. Murphy himself, assisted by Messrs. Clark and Fraley, the well-known firm of George Murphy, Inc., displayed Ross lenses and Autotype Carbon tissues. Considerable favorable comment was heard regarding some prints in the new three-color tissue which were exhibited.

In charge of Messrs. Folmer, Markus, Burkhardt and Parker was the attractive combined exhibit of the Century Camera Co. and the Folmer & Schwing Co. Many of the well-known Century products were shown, including the Century Studio Outfit and Cirkut Camera, while the new Auto Studio Shutter, Focusing Attachment and Tilting Stand of the Folmer & Schwing Co. received much merited attention.

The ever-interesting demonstration of the Eastman Kodak Co. was this season in the able hands of Messrs. Ames, Noble, Robertson, Cummings, Niles and Chappell. Two of the new Dry Mounting Presses, heated either by gas or electricity, were in operation, and sample prints were given away. This new machine marks an epoch in the history of photographic picture-making.

It was not difficult for the Wollensak Optical Co. to secure its share of praise for the new and absolutely silent Studio shutter, as well as the new Royal Portrait lens, working at F. 3.8 and fitted with a diffusing attachment.

The school of the American Aristotype Co. is always one of the features of every convention, and the demonstration of printing, on all grades of Aristo, with the Aristo lamp, was as popular this year as ever. The exhibit was in charge of Mr. T. W. Pattison, assisted by an able corps of demonstrators of each grade of paper, among whom were Messrs. Barbeau, Hazlett, Bouton, Becker, Mutton, Rice, Meacham, Wentz, Hopkins, Lansing and Doehn.

Mr. Weil was on hand for the Seneca Camera Co. with an attractive display of apparatus. Perhaps his best feature was the new bellows support and double shoe on the Seneca View Camera.

"Papa" and Mrs. Cramer, without whom no convention would seem natural, were, with the assistance of Messrs. Sheets, Hart, Dorella, Schaffer and Carrik, making negatives in a small studio, arranged to demonstrate the fine qualities of Cramer plates. In albums were shown the work of men like Strauss, Rosch, Clark, Harris, Ewing and Rinehart on these plates.

Iris, the new matt developing-paper, was the leader of the Antura Photo Paper Company. The product is beautiful in tone and surface, and promises to be popular.

The Hammer Dry Plate Company gave away a large number of gold Hammer scarf-pins, which were highly prized as souvenirs. The exhibit of this firm was in the hands of Mr. Richard Salzgeber and Messrs. Racette, Taylor and Towle.

Although the M. A. Seed Dry Plate Company had no special exhibit, it was extremely popular, as ice-cold lemonade was freely given to the thirsty. Mr. Seed was in attendance, with Messrs. Guthrie, Allen, Richardson, Jones, Stamp and Waide.

E. B. Meyrowitz was ably represented by Mr. E. M. Bennett, whose display of Zeiss lenses attracted much attention.

Mr. Edward Bausch represented the Bausch and Lomb Optical Co., and with Messrs. Hammele, Lawrence, Jarrell, Moore and Kingsbury showed a fine line of lenses and shutters, in all sizes. The portrait Unar lens, which was demonstrated under the Aristo lamp in the Bricker studio near by, carried off the honors, for its work was ample recommendation of its sterling qualities. Beautiful prints by eminent photographers such as Strauss, Rosch, Davis & Eichemeyer, Pach Brothers, Matzene, Steffins, Rinehart, Partridge and Edmondson, adorned the exhibit and still further demonstrated the excellent qualities of this lens.

The C. P. Goerz Optical Works had one of the finest exhibits of the show, including a studio for demonstration, exhibits of lenses and prints showing the quality of the work done by them. An interesting feature was a number of lenses that went through the San Francisco fire. The handsome \$650 Goerz cup, which was awarded to Mr. J. H. Garo of Boston for his magnificent portrait of a girl, was shown, and attracted much attention. Refreshments were served, and Messrs. Holst, Boursault, Goerz, Benson, Chuniard and Lussier gave all information-seekers a cordial welcome.

The Voigtlander & Son Optical Co. were very successful with their new Heliar lens working at F. 4.5 and the Dynar for amateur use, while the Collinar types attracted their share of attention and commendation for superior qualities. Messrs. Yatman and Huesgen were in attendance.

Mr. F. H. Burgess, not to be outdone, had an excellent exhibit of pictures by well-known ar-



## NOTES AND NEWS

tists, all produced with lenses made by J. H. Dallmeyer, Ltd.

A new aspirant for honors, in the convention this year, was the Borsum Camera Co., Jersey City, N. J., manufacturers of the Reflex Camera. The new Reflex has been much improved; it is lighter and simpler than ever before, and the sale promises to be large, as was demonstrated at the convention, where Messrs. Borsum and Fiedler made many friends.

G. Gennert was represented by Mr. Z. S. Cantor, with a fine line of goods, including the Hauff products, Imperial plates, backgrounds and Auto developing-tanks.

The firm of Joseph Di Nunzio had a splendid exhibit of prints made on Angelo Sepia Platinum paper. The richness and depth of tone and the simplicity of manipulation of this paper, as shown by demonstrations freely given, were fully appreciated by a large number of photographers and won many new adherents for this sterling product and its genial maker. Mr. Di Nunzio was accompanied by his manager, Miss Dooley, and Messrs. Marshall and Fanning.

Although the Rochester Optical Co. had no exhibit, Messrs. Carbrey, Smith and Robertson attended the convention in order to meet their many friends and old acquaintances.

Mr. F. Harry Hall was at the convention, as usual, for the Berlin Aniline Works, with a complete display of Agfa products, including developers, flash-light powders and plates.

The Anthony & Scovill Co. had a fine display of their well-known and varied products. Messrs. Pelgrift, Topliff, Standbury and Niemeyer were in attendance.

The chief feature displayed by the Defender Photo Supply Co. was a new collodion printing-out paper, called Ampere. The firm was represented by Messrs. Wilmot, Brown, Kuhn, Daly, Palmer, Dodge, Woodward and Ennis.

Other firms well represented at the convention were The A. M. Collins Manufacturing Co., Trier & Bergfield, Taprell Loomis & Co., Rough & Caldwell, Fowler & Slater, The American Stamping & Embossing Co., J. F. Adams, Bridges Manufacturing Co., C. F. Little, W. P. Buchanan, E. F. Foley Co., Ernst Oeser & Co., A. H. Uhrig, Carl Ernst, Chas. E. Coleman, The Photo Card Machine Co., Sweet, Wallach & Co., The Alford Opaque Co., The Dresden Photo Paper Co. and others.

Among the photographic magazines which were in evidence at the convention were *Wilson's Photographic Magazine*, represented by Mr. T. Dixon Tennant; *The Camera*, represented by Mr. Frank Chambers; *The St. Louis and Canadian Photographer*, represented by Mr. Tony Babb; *The Professional and Amateur Photographer*, represented by Mr. Burton; *Burr McIntosh Monthly*, represented by Mr. Clark Hobart; and the *PHOTO-ERA*, represented by Mr. Thomas Harrison Cummings.

The Wisconsin Camera Club was fortunate in having Mr. Eduard J. Steichen on the program for Tuesday evening, August 21, at the club-rooms, 623 Grand Ave., Milwaukee, Wis.

Mr. Steichen is spending the summer at Menominee Falls, not far from Milwaukee, and kindly consented to talk on "Pictorial Photography" before the Camera Club. The attendance was larger than ever before, and never before in the history of the club was there a more forcible and entertaining lecture delivered. Mr. Steichen was at his best, and explained the development of pictorial photography from its beginning to the present period. He compared photography to painting, and the work necessary to become a pictorial photographer to the work necessary to become a painter. Mr. Steichen had on exhibition at the club a generous collection of his work, and has kindly consented to honor the club with some of his work, this exception to his usual iron-clad rule being made only because of his love for his native city and the pleasure it gave him to be of some help to Milwaukee's enterprising Camera Club. After the lecture an informal reception was held so that Mr. Steichen's old friends might renew their acquaintanceship, and the club members might meet him.

The club membership is now over one hundred, and the House Committee is making arrangements for a number of improvements in the rooms to meet the demands of the increased membership.

Recent excursions to Waukesha Beach and to the famous Dells of Wisconsin were well attended.

The Print Committee has decided to have quarterly general competitions, and a loving-cup will be purchased as first prize, to be given at the end of the club year.

Arrangements have been made for an exchange of prints and lantern-slides with the Chicago Photographic Society.

Other clubs wishing to arrange similar exchanges with the Wisconsin Camera Club should communicate with the secretary, Bernard C. Roloff, No. 810 Pabst Bldg., Milwaukee, Wis.

A very interesting booklet, "Hauff on Modern Developers," has just come to us from G. Gennert, 24 East Thirteenth St., New York City. While devoted to the Hauff products, it contains a wealth of information concerning exposure, exposure-tables, development by inspection, tank and factorial development with metol, amidol, ortol, glycin, adurol, hydroquinone, pyrol, and many combined developers which every up-to-date photographer should know about. The price of the book is twenty-five cents.

The Indiana Photographic Art League, which embraces in its membership some of the leading photographers of Indiana, will convene at the Parrot Studio, Fort Wayne, Ind., Oct. 9, 10, and 11, 1906.

## NOTES AND NEWS

At a recent meeting of the Board of Trustees of the Daguerre Memorial Institute it was decided to offer every year a Diamond Medal for the best picture made and displayed at the Annual Convention of the Photographers' Association of Indiana. (Next meeting at Winona Lake, Ind., July, 1907.)

This medal, to be known as the Daguerre Memorial Diamond Medal, will be awarded by the Daguerre Memorial Institute.

The picture winning the Diamond Medal will be published in all the Photographic and Art Magazines of this country, and the maker will be given due credit.

In addition, the Institute will give a certificate of special distinction to all whose work is accepted to adorn the walls of the Daguerre Memorial Institute.

We now have a collection of photographs valued at over two thousand dollars, and expect to increase it to twenty thousand dollars within a few years.

Will you not begin now to make that one picture? Further information will be given by either of the Trustees.

Board of Trustees: George J. Parrot, President, Fort Wayne, Ind.; Chas. Neiswanger, Muncie, Ind.; George Graham Holloway, Secretary, Terre Haute, Ind.

The second series of exhibitions at the Little Galleries of the Photo-Secession will begin November 1. The first exhibition is to be devoted entirely to members' work. Every member has the privilege of having at least one print hung. It is preferred that prints be unframed, but mounted on mounts 14 x 22 inches; these conditions are not compulsory. Send prints intended for this exhibition by mail or express, prepaid, to PHOTO-SECESSION, 291 Fifth Avenue, New York, N. Y., on or before October 15.

This exhibition will be followed by monthly exhibitions of American and foreign work.

From William Butler, 20 Crosby Road, Southport, England, we have received a most interesting booklet describing the new Swinacam camera-stand, which sets at defiance all the limitations of the ordinary tripod which have been so keenly felt by serious workers, particularly those dealing with specialized photography, such as naturalists, architects, surveyors and engineers. Each leg of the tripod is attached to the head by a kind of universal joint, and these permit of the camera being placed in any desired position after the legs have been firmly planted. It will be found in practice that, once the simple manipulation is learned, the lens can be pointed directly downwards, upwards or at any angle. It is, in fact, a veritable contortionist among tripods. Also, in taking interiors, the camera can be placed close up in a corner or flat against a wall, where the ordinary tripod is useless. The pointed ends of the legs are adjustable to angles of 90° and 45°, thus enabling the worker to get a firm hold, no matter how much splayed the legs may be. Another useful feature, particularly in natural-history work, is the extension pieces by means of which the height of the tripod can be increased by one half very quickly. The head need not be detached, but folds flat with the legs,—a point which will be appreciated by motorists and cyclists who do not care to spend time on the road in putting a tripod together. The instrument is beautifully made, by no means heavy, and forms a distinct adjunct to the equipment of any practical photographer.

The Eastman Kodak Company of New Jersey. — The usual quarterly dividends of  $1\frac{1}{2}$  cent (being at the rate of 6 per cent per annum) upon the outstanding Preferred Stock, and of  $2\frac{1}{2}$  cent (being at the rate of 10 per cent per annum) upon the outstanding Common Stock, have been declared payable, on Oct. 1, 1906, to stockholders of record at the close of business on Aug. 31, 1906.

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## PHOTOGRAPHIC PROBLEMS WITH SOLUTIONS BY PRACTICAL MEN

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UNDER this heading we insert questions of a practical character relating to photography, preferably the technical side. For each suitable question which we publish, we offer twenty-five cents. We also give two dollars for every answer we print, our selection to be absolutely free of any prejudice. The answers to any problem should be in our hands within ten days after the same shall have appeared. The replies should deal concisely with the points at issue and not exceed three hundred words in length. In this connection we shall use only the initials of correspondents, whose identity will, on no account, be disclosed. Irrelevant or discursive answers will not be considered.

### QUESTIONS

What is the best studio light, and why? — C. E. A.

How can the amateur photographer work Aristo paper as successfully as the professional?

— W. F. N.

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Contributions relating to photography in any and all of its branches will receive our careful consideration. While not accepting responsibility for unsolicited contributions, we will endeavor to return them if not available, provided return postage is enclosed.

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ADVERTISING RATES ON APPLICATION

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JAN STEEN, PINXIT  
THE DANCING LESSON  
RIJKS MUSEUM, AMSTERDAM



# PHOTO - ERA

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BRINGING THE BALSAM BOUGHS FOR NIGHT-TIME

## CANOE LIFE AND CAMPING IN ONTARIO

JULIAN A. DIMOCK

*Illustrations by the Author*

OUR camp was founded upon a theory, with the theorist as boss and Bob and I merely bottle-washers. To be sure, both of us had lived in the woods before he was born, but in those days nature study and theoretic camping were undeveloped. His seductive tongue captivated my imagination and depleted my purse so that I am now the possessor of a large assortment of articles, indispensable to the camper in the forest, which are somewhat shopworn but otherwise quite new.



BOB DISCOVERED A NEED FOR FIREWOOD

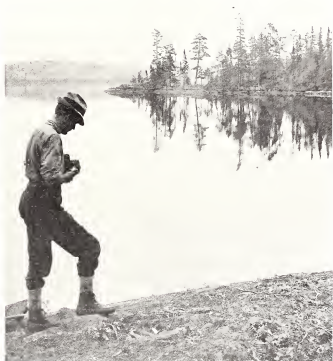
It seems proper to explain here that, although I have camped much, I always have been and always will be a tenderfoot. I have n't the woodcraft that finds dry wood in the rain, don't know on which side of a tree the moss grows, and can't make a fire by rubbing two sticks together. When I wanted to know where we were I asked George, our Ojibway guide, and when we needed a fire he usually rubbed a match on his breeches.

For a week we fought the fight and kept the faith of the orthodox camper. We showered anathemas upon the man who criminally left a paddle lying on the ground, instead of standing it against a tree, that porcupines might not gnaw the handle. George had never seen a porcupine in that country, but thought that if one should ever come there he would be very likely to gnaw that handle.

The guy-ropes of the tent had to be fastened with certain knots on rocky ground and in quite different fashion when the soil was soft and rooty. As no fatal casualties occurred, I conclude we made no mistake in this direction. The wood of the camp-fire was arranged in geometric forms, and hanging a kettle was a study in architecture. Our itinerary was calculated with the precision of an eclipse, but the omission of such factors as storms and head winds made living up to it a strenuous affair involving extra portages and doubled-up packs.

Our grief was sincere when, at the end of a week, our theorist left us. Bob

turned aside to hide his emotion, and casually kicked over the geometric wood-pile. George smiled superiorly as he pressed tobacco in the bowl of his pipe and accurately spat at a spurt of flame from a pine knot on the camp-fire.



ATMOSPHERIC EFFECTS TO PHOTOGRAPH

We were yet in the track of the tourist, so we folded our tents and turned our faces towards the pole star. At last we were in the forest primeval! The final sign of civilization was behind us. A portage separated us from the lake whose shores had been despoiled by globe-trotters. Before us lay the unbroken woods; and the peace of the wilderness possessed me, when my dream was dispelled by the sound of my own name. I was scarcely even surprised. It had happened before. I had been awakened from dreams of solitude in the mountains of the West and the Everglades of Florida, on the arid plains of Arizona and the great lake country of the North.

The wildernesses have been reckoned with, and the parlor-car tourist sup-



LOOKING FOR FISH BY TORCH-LIGHT

planted the explorer. That night we camped near our discoverers, Mr. and Mrs. Howell and their two friends, and talked into the small hours beside their camp-fire, closer neighbors in the woods than in the homes that adjoined in the distant city. They were campers among ten thousand, who had dispensed with guides and were finding their own way, the men paddling and portaging, and the girls cooking and making a home of the camp. It was only long afterwards, in the city home, that we realized the full value of that night beneath the stars, in the store of reminiscence for the lighting-up of the contrasting, but normal, environment of the gregarious human animal.

In the morning we pushed leisurely forward until a rain sent us into camp, where it might have confined us for a day if Bob had not discovered the need of firewood and sallied forth with oilskins and an axe, while I made a barefoot tour in search of trees whose mossy side jibed with the compass. Then the rain was intermittent, the rising mists changed with charming atmospheric effects which could be best studied from widely separated view-points, until when I took an involuntary bath from my canoe it did n't add much to my wetness. We trolled for bass and pickerel, and discovered later how superior is the flavor which a fish acquires when it is wrapped in leaves and baked in the ashes.

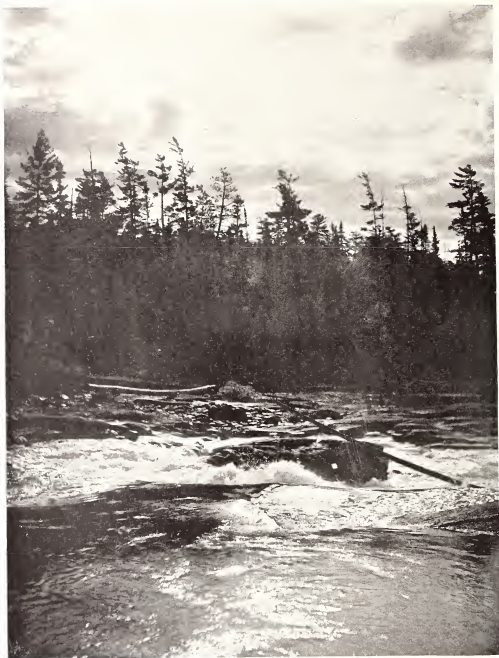




A HUDSON BAY COMPANY POST

GEORGE COULD COOK TO A TURN

FOR FAVORING WINDS WE RIGGED A SAIL



THE CALL OF THE RAPIDS





THERE WERE TROUT TO CATCH

It was only the rapid approach of the expiration of our transportation and the recollection that we came to see canoeing in the rapids that broke up our camp and started us anew on our pilgrimage. The course of our canoe down a swiftly running river between rocky shores that formed miniature gorges, while the current, eddying around seen and unseen boulders which kept our paddles busy, sometimes dashed over rapids around which we were compelled to portage through the woods. The foliage was taking on the hues of the autumn, and the shores of the lakes were brilliant with their colors, which seemed to change from hour to hour. While the dominant note was a sombre green, there were masses of deep red, brilliant patches of yellow and delicate shades of many colors. The hillsides were covered with forests of pine, cedar, tamarack and poplar, while in places the sky-line was serrated with giant skeletons of trees, relics of some long ago forest fire, which stood silhouetted, often with weird effect, against moon-lighted scudding clouds.

Across these lakes heads are bared and collars opened to the fresh free air of the great north wind, that for a thousand miles has swept untrammelled and unpolluted to fill our exhilarated lungs and to inspire us with the joy of life.

Once we got too much of this good thing, and our north wind swooped upon

us when half way across a lake, held all hands to the paddles, and then sent waves lapping their crests over the gunwales of the canoe, until the chance of not reaching the shore seemed to me one of growing importance.



PACKING TO BREAK CAMP

We met a few oldest inhabitants, and listened to Hudson Bay Company officials' exploitation of the ancient trading-tricks of this great company.

The last night of a camping-trip is filled with solemnity. Our tent was pitched near a lumber-camp, while another party was within hearing. The moon was at its full, and this party joined us beside our last camp-fire. There were violin-playing and singing from the lumber-camp, responded to by songs from the tourist camps. Late at night, as the music seemed to have nearly died out, there was one final inspired song that came of itself and filled the air and our hearts: "My Country, 't is of Thee."

## WHO OWNS THE NEGATIVE?

G. E. WOODWARD

**W**E sometimes wonder if the photographer realizes what a priceless possession he has in the negative; if he realizes the possibilities of expansion of business which hinge on the possession of a good, clean negative — the best negative that has ever been made of the subject.

We are inclined to believe that nine photographers out of ten do very little business on large work — we mean enlarged portraiture finished by an artist — for the simple reason that they make no bid for it. They are content to take what comes; and if approached on the subject they say, "Oh, the agents get all that! They come into my town in hordes." We grant all this is true. But why does the photographer let the canvassing agent do this? Why does n't he get this business — or at least the larger portion of it — himself? Who has a better right to this business, or who has a better chance to get it? The photographer is right on the ground; he has the advantage of a personal acquaintance; and, best of all, he owns the negative from which the last photograph was made.

Now why does n't he use this negative to advantage? Why stop with an order for a dozen or two dozen Aristo prints, or platinums? Why not impress on every customer who has the wherewith to pay the price the fact that a nice portrait of a larger size can be made from this negative, a rich sepia or a dainty water-color — "an especially good portrait because from a particularly fine negative"? Impress upon the subject that you would be glad to make such a portrait for him, and it would receive your personal attention and criticism; that you would of course expect to receive an equivalent in cash for the portrait, but let that be an after-consideration. People pay the price for what they want most; and if the desire is created (in a disinterested way of course) by the photographer they will pay a price for the large portrait in proportion to the price asked by the photographer on his contract work; and they will order this portrait and pay the price just the same as they will pay for any other luxury — an Oriental rug, a set of books, a beautiful picture or a piece of bric-à-brac — because they want it; because the desire has been created by the photographer; because he owns the negative.

Then there is another class — the people of moderate means (and this class is by far the larger) — the people who count the cost but are not stingy, who pay a fair price for an article which appeals to them. These people of moderate means are the mainstay of the photographer, for they pay their bills and pay them promptly; they are loyal to their friends and devoted to their families. A portrait in any medium or any size appeals to them — in some cases the larger the better. Now why should the photographer who owns the negative allow the itinerant canvasser to come into his town and pick up good business in large work right under his nose, and send the pictures a thousand miles away to be made? Why does n't the photographer get this business? Why does n't



ADALINE CAMPBELL

BROUGHT TO THE NET

he? We say he can get it if he will educate his patrons to the fact that he owns the negative, and that a better large portrait can be made direct from the original negative than can possibly be made from any small picture without the negative.

An enlarged portrait from a life negative pays the photographer good money for handling it, and is a legitimate part of his business. It is not expected that a photographer should solicit business from house to house like the canvassing agent; but he can let prospective customers know where he is, that he wants their order for a large portrait, and that he owns the negative.

Why should any photographer feel that it is a sacrifice of his professional dignity if he appeals for business? Other men appeal for business — manufacturers, merchants, bankers, architects — why should n't the photographer? Who is the most respected — the dreamy, sad-eyed, dignified photographer with an "ideal," or the photographer who is a business man and lets the people know it? The business man handles large work; he owns the negatives.

## HOW WILD DEER MAY BE PHOTOGRAPHED

JOHN BOYD

FOR eighteen years, during my annual hunts, I have carried a camera, in hourly expectation of being able to catch the images of our live wild deer on the sensitive plate. During that time I have seen several hundred deer, but in only a few instances were the conditions favorable for getting a camera-shot at these, the wariest of our game animals. It is true that during the months of October and November the deer are more alert than at any other period. It is also a fact that the districts I hunted over were in the main heavily wooded, and offered fewer opportunities for quick exposures than a country having a more diversified landscape.

It was in 1887 that I first succeeded in getting a buck, doe and fawn in line with the lens, but they were so far away on the opposite shore of a lake that when the plate was developed the figures could only be identified by a lively stretch of the imagination and accepting the word of the photographer. This first success led me to study the matter thoroughly, and prompted further experiments.

My experiences may be similar to many other enthusiasts with the rifle and camera, but nevertheless the knowledge that has been acquired during these years may prove profitable to others who are still seeking to picture this noble animal on its home heath.

Eighteen years is a long time to experiment for the chance of making a few negatives; but I consider it has been time well spent, inasmuch as it gave abundant opportunities for studying out the peculiarities of the deer family, and made me better fitted for the task of photographing them when the moments came for action.

I shall not enlarge too much on the habits of the animals, as that would be a theme to interest the zoölogist, but nevertheless shall have to combine for a while the knowledge of the naturalist with the skill of the photographer, knowing that what would be a fair distance for observation to the former would be utterly useless to the man with the camera.

How, then, shall we be able to approach these animals in order that we can obtain a fair-sized picture of them?

I don't think there is any way of getting up to within photographing distance of an able-bodied unwounded deer, notwithstanding all the contrivances that have been suggested, such as imitating a cow by two men getting beneath a skin of one and walking up to where deer are feeding, utilizing in this way the well-known habits of these two species of grazing in amity. The genuine cow can do it, we know, for we have seen it often; but when the cleverest imitators try it the deer find it convenient to seek other pastures.

The way I recommend is to utilize the crossing-places on river, lake and creek; on runways leading to them, as well as those made inland, all of which are constantly used by the animals when travelling from place to place, in much

the same way we human beings make a path in winter when going from one house to another. No matter how crooked that path may be, or the course it follows, all others who have occasion to go between the same points will use that track, and its use will continue until it is well defined, and it may finally even blossom out into a surveyed road.

This following of tracks is an instinctive habit with deer, and it is often the path that leads to their destruction.

It matters not at present what reasons they have for doing so, it only remains for us to take advantage of the facts, and secure by their aid those prized negatives we have so long wished for.

Our first step will be to find out the runways; and if you have a guide who has previously learned the trails made by the deer the previous winter you will save yourself the necessity of starting up these nimble-footed creatures for the purpose of finding out where they run to when alarmed. I have emphasized in the preceding clause that we locate the trails made the previous winter, for it is an undisputed fact that deer make new runways each winter, while the snow is deep, and continue to use these until the next snow falls.

Having found one, we can profitably spend a day or more selecting a suitable spot for our hiding-place, both in relation to the light and the wind. It is better to have two or three that can be used as the wind or light changes. If it is found necessary to build a mound or breastwork of stones, logs or brush, we should do so without making any noticeable changes in the surroundings, and at least a couple of days before we intend to use it. This will give the deer a chance to get accustomed to it, for you may rest assured that the night after you have changed the landscape by these alterations your work will receive a thorough inspection, and a decision will be come to then and there if it is to be considered dangerous in the eyes of these dwellers of the forest. You would better visit it the following morning, and if you find fresh tracks you can then rest happy until the next day, when you must again visit it; and if still newer signs are found travelling the runway you can have fair hopes that your planning thus far has been a success.

You are now ready to install yourself and your outfit, and I recommend that you get to your stand early and be prepared to stay as long as the light is actinic enough for photographing. A word of caution to the camerist: one which has often been impressed on the hunter is, not to make any noise; not to make a quick move under any circumstances; and keep your eyes slowly patrolling the country as it lies before you, for a deer not scenting a danger-spot is a spectre that will appear to you when you least expect it, and often at a point hitherto thought unlikely. We will now suppose you have sighted one, and it is carelessly moving about, nibbling a mouthful here and another there; now coming towards you, and again perhaps retracing its steps, or again away off to one side of the trail, but surely getting closer, and with the runway as a centring-line. Don't get impatient or excited; you have already seen that your camera focus has been set for a certain spot or distance; you have selected the





ERNEST HAROLD BAYNES

A WHITE-TAILED FAWN IN SEPTEMBER

diaphragm that seems best adapted for the light, the season and the speed you have set the shutter for. The holder has been put into its place long before, and at an opportune time the slide is removed. There is no telling how that deer will act when it reaches the spot you have focused for, if it ever will come to it; so in placing yourself, get as much range as possible for the camera and have it free to move as you wish. Set the shutter for 1-50 to 1-100 of a second, in case it comes to you on the run, and trust to careful development to coax out the detail should it mean undertiming.

Again, we will suppose that the deer has kept away from our blind, and still feeds about on the adjacent hills, or in the valleys below. We will then feel the need of a telephoto lens, and no serious-minded nature photographer will be without one of these in his outfit. It is so handy to be able to unscrew your regular lens off the front board, screw on the telephoto, add your lens and shutter, and have the power to creep up eight-tenths of the distance that lies between us and the subject, without moving as much as a foot. Of course to work this magnification we have got to have a long draw of bellows, but nothing more than what is now regularly added to the better class of cameras.

If in both these ways we fail to secure a picture because the deer did not come to us, we must try another plan and see if we can fetch him up to the camera. For this we shall need some one to start the animals, and as they will undoubtedly come to us at a speed known best to hunters, and not to photog-



ERNEST HAROLD BAYNES

A DWELLER OF THE FOREST

raphers, we shall have to check them in some way, if we are to get anything more of them than a streak. There are several ways of accomplishing it, but none better than bleating loudly like a sheep. This must be done at the proper moment, and without exposing the person in any way; for if the deer sees a human being it will take an instantaneous turnabout and make tracks for the next township; but if it hears an unusual noise, and sees nothing, it will stop suddenly and look about to discover what made it. This is where the photographer gets his chance, and he must not be slow to take advantage of it, as it is only momentary.



ERNEST HAROLD BAYNES

A BROWN-TAILED FAWN IN JUNE

Such are some of the things that are learned by carrying the camera in the woods; and if they or a modification of them are put to a test there is little doubt but success will crown the efforts of the one who is willing to give them a reasonable trial.

My outfit for the woods consists of a folding 5 x 7 camera with extra long bellows; anastigmat lens, and diaphragm shutter working up to 1-150 of a second, to which has been fitted a high-power telephoto lens, capable of magnifying to ten diameters; a threefold tripod, strongly built, with detachable head, and tripod screw attached so it cannot be lost; a rubber focusing-cloth, with numerous hooks and eyes so it can be securely fastened over and around the camera for the protection of it and the plate-holders. There are two finders fitted to the camera — one of the regular pattern with hood to screen the light, the other a convex glass placed in a rectangular frame so that it can be examined from the back when lying down behind the camera waiting for game — and a 100-foot length of  $\frac{3}{8}$ -inch rubber hose which can be attached to the shutter and worked from a distance or a tree by means of a large bulb or bicycle-pump.

The whole of this goes in a leather case, except the tripod, and it also fits in a case with outside loops, so that by passing the straps of the camera case through it the entire outfit can be slung over the shoulder, leaving the arms free for carrying a rifle or any other thing you may have.

I also take a changing-bag to the woods, but this, with the supply of plates, is left in camp, where the unloading and loading of holders is done when necessary. The changing-bag is made of silesia and ruby and yellow fabric, and need not cost more than twenty-five cents, exclusive of the making.

Take four yards of silesia, which may cost five cents per yard, and double it once, which gives us a piece two yards long by one yard in width; fold this again, sewing up one side and top. Cut a hole six inches in diameter, either square or round, through two of the thicknesses, so as to make a window; into this stitch two pieces of canary or ruby fabric, obtainable at any supply-house, and you will have a safe light to work by when completed. Take a strong cord and run it around the bottom between the folds, so as to act as a drawing-string. This completes the bag, and to use it you have simply to put it over your head, after you have gotten your holders, plate-boxes and camel's-hair brush inside, draw the cord, and tie it tightly under your vest, and you will have comfort, sufficient light and safety to handle all classes of plates, even under the brightest sun.

This is my outfit, and I want no better, nor can my experience suggest any additions or improvements. With it I have gathered pictures that are prized beyond price, and I have only to bring them forth to live over again all the trials, perils and pleasures that accompanied the making of each and all of them.

## A NOVEL VACATION SOUVENIR

OSCAR VON ENGELN

A HAPPY time, especially such an one as a summer vacation, counts most in the reminiscences of it in later days. We are not long in coming to know this, and constantly strive to find something to carry along back home with us — something which, by its associations, shall serve as a suggestion of the past. Truth to tell, however, the souvenirs we accumulate are for the most part far from satisfying, and, when purchased from shops, are often tawdry.

Especially difficult is a country vacation in this respect. Photographs supply the want in a certain measure, but they fail, in that they preserve only the shadow and not the substance. On the other hand, collections such as of pressed wild flowers and ferns are difficult to preserve in a form which shall be at once attractive and accessible.

A happy thought, coming while engaged in handling a collection of wild-flowers, and suggested in part by the method of mounting them I had adopted, resulted in the combination to be described, wherein the trophies of the collector's zeal and the camerist's art are associated without tawdriness or gaudiness. In the fewest possible words, it consisted in arranging on one mount a photograph and a flower or leaf, associated, in some way, with the print. Extremely attractive and decorative effects can be secured by a judicious selection of colors, both in mounts and flowers, and by care in arrangement. The illustration will convey a general idea of the results to be attained. The method is simple and the material easy to get.



OSCAR VON ENGELN  
A NOVEL VACATION SOUVENIR



First, the flowers must be gathered in as perfect condition as possible, and put in a botanical press before wilting. Such a press consists of heavy blotting or carpet papers, cut up in sheets, 11 x 14 inches, and pieces of soft paper of the same size. Between these latter papers the specimens are carefully laid, and then each specimen placed between two blotting-sheets, after which they are piled up, and a weight applied to the whole. I place four or five paving-bricks on a board 11 x 14 inches in size, and they make very convenient weights. It is important that the specimens be thoroughly dry before being taken from the press; if they are not the flower colors will fade.

The mounts employed are the decorative cover-papers which printers use on art catalogues and booklets. These papers are inexpensive and obtainable in the greatest variety of shades of brown, green and gray — the best colors for photographic mounts — and a number of different textures may also be secured. For 5 x 7 prints cut the whole sheets into four 10 x 12 mounts; for smaller prints, into 8 x 10 sizes. A full sheet costs from four to six cents.

Now from your selection choose a mount of harmonious tint, and on it lay the print and pressed specimen, placing them so as to secure an artistic effect, which you will find quite easy, as in pressing the flowers develop the most subtle and decorative of curves.

Next, thoroughly mix one part of glycerine with nine parts of fish-glue, and, having procured a piece of window-glass somewhat larger than your specimens, spread this adhesive thinly but evenly over the glass. Now place the specimens on the glass, taking care that all parts come into light contact with the glue, and then lift them carefully and lay them on the mount previously selected, in the position determined upon. In most cases they need not be pressed into contact, for they seem to adhere lightly and firmly at once. Avoid pulling the specimen; if it cannot be laid on all at once, put the tips down first and the stem end last.

There remains only the mounting of the prints. As the mounts are thin the paste had better be applied only at the corners, or in a narrow line around their edge. This latter method is best accomplished by the use of a piece of cardboard one eighth of an inch smaller all around than the print. This piece of cardboard should be laid on the back of the print, and the paste may then be applied along the edges, the cardboard meanwhile protecting the rest of the print.

A collection of this sort of specimens is always interesting, is easily preserved in a paper portfolio, and can readily be shown to friends. Summer and autumn flowers are especially adapted to this method of treatment, as they have drier and firmer stems and leaves than spring flowers. Individual artistic talent is afforded an opportunity for display in decorative lines around the print, or in multiple mounting.

The idea need not be confined to photographs; water-colors lend themselves charmingly to this treatment. In *passe-partout* they are especially fine for wall use in home decoration.



JOSEPH THIBAUT  
A YOUNG RUSTIC  
NEW ENGLAND CONVENTION



## THE KALLITYPE PROCESS

JAMES THOMSON

**K**ALLITYPE as a method of photographic sun-printing may be said to have passed the experimental or doubtful stage. It is the method *par excellence* for the worker of serious purpose to whom the "fatal facility" of the gaslight paper has no appeal. Many there are among amateurs who sigh for results removed from the common. By printing on media of their own sensitizing — paper of quality and texture that is rare — these fastidious ones may fulfil their desires.

As at first worked, kallitype had a most serious defect in the rustiness of the deeper shadows following the use of a negative of more than usual contrast. This trouble, however, has been eliminated, and the process is now capable of results quite the equal of platinotype, to which it is akin, the basis of both being ferric oxalate. We find in each the same richness in deposit of metallic particles, the same softness and beauty of gradation in half-tone, and the presence of those qualities that make the pictorial image more like a wash-drawing than a photograph.

The modifications of the original formulas have been many, and for the greater part good, though some are rather involved as regards manipulation. For this reason I early sought for a more direct means than was then available for the production of prints in pure black and white, and I think I have succeeded. My process at least has the merit of cheapness, for the cost is trifling, in fact not much in excess of the "blue print." In brief, the process is as follows, and, as can be seen, is extremely simple.

A good paper is coated with the sensitizer, dried by artificial heat of *low temperature*, and is then printed under a negative. There is a faint image, much as in platinotype, but of a tawny hue. This image is *instantly* brought to full vigor in a bath of weak silver nitrate acidified with citric and oxalic acids. After about a minute the print is washed free of sediment, and is fixed for five minutes in weak hypo, after which it is washed for half an hour and dried on clean papers or between blotters.

The image is black, but many warm colors, from purple all through the red chalks to sepia, are quickly and easily obtainable by toning with uranium and fine cyanide of potassium, some of the colors and effects being rare and indeed very beautiful.

In regard to quality of paper, it should always be of linen, preference of course being accorded that especially made for photographic purposes. Excellent results, however, may be obtained on heavy bond and ledger stocks, Scotch linen ledger being among the best. This last comes in sheets, the dimensions of which are 19 x 24. This cuts to good advantage, whatever the size of plate employed. Nor are the common, every-day note-papers to be despised, where small sizes are demanded. Vellum, parchment, Irish linen, Berkshire Mills, cream laid, may be here suggested. For soft effects, the more fibrous papers are in



order, and these, as well as the Japan tissues, should have a generous portion of a good size either of arrowroot or gelatine. Rub up in a bowl in a little cold water twenty grains of the arrowroot. Then pour on it, constantly stirring to prevent lumps, ten ounces of hot water. Bring to a boil, when the milkiness at first present will disappear. A couple of ounces of wood alcohol may be added once the mess is filtered. For black-and-white effects the following has been found satisfactory:

*Formula A:—*

Distilled Water .....	1 ounce
Citrate of Iron and Ammonia .....	32 grains
Ferric Oxalate .....	16 "
Oxalate of Potass. ....	33 "
Oxalic Acid .....	10 "
Chloride of Copper .....	4 "
Citric Acid .....	4 "
Silver Nitrate .....	10 "
Gum Arabic .....	10 "
Bichromate of Potass., five per cent sol. ....	10 drops

For coating small sheets, 4 x 5 or 5 x 7, a wad of absorbent cotton will answer when but a few are wanted at a time; also where but a small portion is intended for printing, and the effect of a careless wash-drawing is sought. For large sheets, however, a good camel's-hair brush is advisable, the flat variety, two or three inches wide, and rubber bound. It is a good plan to coat paper on a thick sheet of glass, holding the paper by four small metal clips such as are used to hold neckties in place. A piece of the dimensions of 8½ x 11 in. will answer for most purposes. This size of paper will allow for two 5 x 7 or four 4 x 5 prints at each coating.

Pour a small quantity of the sensitizer on the upper section of the sheet, and with rapid strokes of the brush go over every part. The idea is to complete the coating of all parts before any one part has dried, thus insuring an even coating. With rough paper it is a good plan to first sponge with clear water, and when nearly dry, to apply the sensitizer, which insures the latter flowing into the meshes, a thing sometimes difficult to effect when the paper is bone dry.

Formula A may print rather slowly, but the blacks obtained are good. It is best adapted for use with rather hard, smooth papers, and for porous stock may require dilution. The generality of workers, I find, are inclined to strong effects — good contrast — and lovers of low tones may find this sensitizer rather strong for their purposes. In such cases withhold from five to seven grains of the iron citrate to the ounce of solution. In preserving all detail in the shadows it is best to use a rather weak sensitizer and give a double coating. Should the solution be found too weak, it may easily be made stronger by the addition of the iron salts.

Ferric oxalate being a somewhat difficult chemical to obtain outside of the large cities, I have made many attempts at a formula giving black tones



THE BYRD STUDIO  
PORTRAIT OF A LADY  
NEW ENGLAND CONVENTION



wherein it might be omitted, but in vain. The following is as near as I have come to it. For more contrast add one or more grains of the ferric oxalate:

*Formula B:—*

Distilled Water .....	1 ounce
Citrate of Iron and Ammonia .....	50 grains
Ferric Oxalate .....	13 "
Oxalate of Potass. ....	35 "
Chloride of Copper .....	8 "
Oxalic Acid .....	16 "
Silver Nitrate .....	16 "
Gum Arabic .....	10 "
Bichromate Sol., five per cent.... 5 to 10 drops for contrast	

For contrasty negatives use a smooth paper, giving but one coat of sensitizer. For flat, overtuned negatives, use a rough paper and coat twice.

Printing in the shade would be rather slow, so it should be effected in the sun. Print until the deeper shadows are well defined, the half-tones being invisible. In a snow scene, for example, or in the case of a white dress, in a portrait or figure study, no trace of the finer details should show. Half-tones, as a rule, appear simply as white paper.

The developer should be made up as follows, this being a stock solution:

Distilled Water .....	1 ounce
Citric Acid.....	10 grains
Silver Nitrate .....	40 "
Phosphate of Soda .....	1½ "

To seven drams of water take one dram of the stock solution and about a dram of oxalic acid. A piece of the latter about an eighth of an inch in size will be near enough. For developing, use a porcelain or glass tray, which should be kept clean and occasionally washed with muriatic acid.

Immerse prints face down, immediately turning them over to see that there are no bubbles present, which would leave white spots in the finished print. If there should happen to be any, break by a slight touch with the point of the finger. Development will be fully completed in a minute or less, nor can we overdo it once exposure is correct. Wash prints for a minute or so; then transfer to the clearing or fixing bath made up in the proportion of about two grains of hypo to the ounce of water. While for smooth papers five minutes will be sufficient for fixing, ten minutes may be safely accorded heavy, rough papers. Dingy whites indicate insufficient fixing and fading of the shadows when it is overdone, though there is not much danger of that unless drying has been too hasty. Complete operations by the usual wash for, say, half an hour.

For the sensitizer as well as the developer a dark bottle should be chosen. Add chemicals in the order specified, after which, without any shaking more than turning bottle upside down once or twice, put away for twenty-four hours in a dark place. At the end of this period stir up sediment from the bottom, shake well, and filter through absorbent cotton. The sole necessity for filtering

is to free the solution from certain gritty particles which, if remaining, will mar the surface of fine papers in coating. Place a wad of the cotton in the *glass* funnel, pour into the centre of this the solution, sediment and all, and gathering up the wad between fingers and thumb, squeeze all liquid back into the bottle. The gritty substances will remain in the meshes of the cotton.

To provide against possible failure, I herewith submit additional formulas. For flat negatives, full of detail and overtinted, the following should give good results, and if it works out as it should the tone will be black, with a greenish cast:

*Formula C:—*

Distilled Water .....	1 ounce
Citrate of Iron and Ammonia .....	28 grains
Ferric Oxalate .....	23 “
Oxalate of Potass.....	35 “
Chloride of Copper .....	8 “
Oxalic Acid .....	15 “
Silver Nitrate .....	19 “
Gum Arabic .....	10 “
Bichromate Sol., five per cent .....	5 drops

In all formulas submitted there is a very careful balance of certain chemicals. For example, in this last a trifle less (a grain) of the silver will make a marked difference in the tone of the black. A slight excess of silver tends to green, while the same excess of copper makes for blue. Overmuch of the former means rusty shadows, while too much of the latter tends to flatness.

For fine gradation and delicate grays in the half-tones I suggest

*Formula D:—*

Distilled Water .....	1 ounce
Citrate of Iron and Ammonia .....	18 grains
Ferric Oxalate .....	28 “
Oxalate of Potass.....	36 “
Chloride of Copper .....	9 “
Oxalic Acid .....	16 “
Silver Nitrate .....	18 “
Gum Arabic .....	10 “
Bichromate Sol., five per cent .....	5 to 10 drops

When found too strong, the solution, as a rule, may be diluted; but if there should thereby be a debasement of the image a stronger developer should be used — a little more from the stock bottle.

In the presence of a great advance in the price of platinum, this particular kallitype process should find favor. Worked at its best, it is with difficulty distinguished from platinotype, and as for lasting qualities, it is as good as any other silver process, while more artistic than most of them.

In regard to successful working, a great deal depends on the quality of the ferric oxalate. It may be obtained of the leading chemical establishments in our



GEO. E. TINGLEY  
" MOSSES FROM AN OLD MANSE "  
NEW ENGLAND CONVENTION



larger cities; and when in prime condition should appear in shining greenish-brown scales. When at all powdery or matted together, with a tendency to cling to the sides of the bottle, it should be rejected as worthless for our purpose. Many failures in the process I am convinced might be traced to defective chemicals, more especially the ferric oxalate. In my own experience, I lately had to complain to the leading druggists in Boston of ferric oxalate obtained of them and found useless. In looking over their stock of this chemical they found all but a single ounce in the same defective condition. Still they had been selling from the stock all the time, and some experimenter may be wondering why he failed. Once you have bought the ferric oxalate, discard the shaved cork that comes with the bottle, and substitute one of the regular kind that has been soaked in hot wax. Keep the sealed bottle inside of an air-tight screw-top jar. Such jars as the housewife uses for preserving purposes are just the thing. Under such precautions the last few grains will be found in as perfect condition as the first.

Prints *slightly* overexposed are just right for uranium toning, it having a somewhat reducing effect. This formula is as follows:

Uranium Nitrate .....	4 grains
Ferricyanide of Potass. ....	4 "
Glacial Acetic Acid .....	16 drops
Water .....	2 ounces

Immerse prints, and rock until desired tone is reached; rinse and transfer to a tray of water in which there are a few drops of acetic acid. In running water, swab back and front, then wash for not over ten minutes; dry on blotters. In this bath brilliant reds should mature in about five minutes. In my own practice I seldom take the pains to measure the chemicals. I simply take some water in a tray and throw in a few grains each of the uranium and ferricyanide of potassium, with the addition of a few drops of acetic acid. All the reds are pleasing, and by varying the proportions of the chemicals a great variety of tones and colors are at our command. Swabbing the prints back and front is, I find, essential — particularly in the case of rough papers — to eliminate the sediment, which, if permitted to remain, impairs the purity of the whites. If this system of toning is done as it should be there need be no complaint of impure whites, where the above precautions are observed and the prints are allowed to get bone dry before toning. This for some reasons seems to be important, results not being as good otherwise.

While this entire process is simple enough, practice makes perfect here as in all else. The best of chemicals should be utilized, and the utmost cleanliness employed. The fingers are apt to become stained with silver, and prints should therefore be carefully handled by the edges. Marks from soiled fingers will produce yellow stains that no amount of washing can eliminate.

To those who may try this process and fail to get anticipated results, I would say that any inquirer will find me ready to answer them, where the necessary postage is enclosed. Beautiful pictures have been made by this process,

and specimens were submitted to experts of national repute before venturing to publish the formula. My personal employment of the process being limited, it seemed to me a pity that all might not share in it; hence my giving it to the craft.

Failures no doubt there will be; but where so many different formulas are given as is here the case, they may be attributed to something outside of the process — defective iron oxalate, perhaps. Where this chemical is below the standard fairly good prints may be had, but the deposit is scanty. There is, therefore, lack of richness in the shadows. In such a case the addition of from two to twenty drops of a solution of chloroplatinite of potassium will save the day. The smaller quantity will insure purple-black pictures of vigor, while the larger tends to reds.

Those having a taste for experiment may find some unusual effects by varying the proportions of the ingredients as here given. In Formula A the addition of from two to four grains each of the copper, silver and the oxalic acid may be suggested for a trial where the blacks are not good, or where some other tones are sought. There is an exact excess of the silver that gives very pleasant sepia, but too much makes rusty shadows.

## THE CAMERA AND THE NEWSPAPER FEATURER

FELIX J. KOCH, A.B., A.G.S.

NOT less marvelous than the development given to the newspaper in the last decade or so is the demand which the camera has taken on among newspaper workers, and notably that branch of newspaper workers who are grouped under the title of "featurers."

The part the featurer plays in the make-up of the modern paper, and with him the share the camera takes in present-day journalism, is understood by comparatively few outside the ranks.

As is well known among readers generally, in a given city, the city itself, the county, and the larger centres of the State are divided up among certain persons, each of whom is "exclusive" on his route, and to whom the paper looks should it miss a "story" concerning this given section. To these men it is allotted to cover thoroughly their territory, reporting every happening, great and small, and leaving it to editorial wisdom to eradicate what may be deemed irrelevant. If a great man dies these people get his photograph. If a building burns they may get the picture of it, taken some years before — that is, if it be of sufficient importance. There their work ends.

The featurer's task begins here. In a line he finds a page.

To take an example from the State of Ohio: a Cincinnati newspaper, under the head of "Kentucky Correspondence," may contain a line or two to the effect that the Shakers of Pleasant Hill are preparing to celebrate the centennial of their settlement.



MORRIS BURKE PARKINSON  
LILLA ORMOND, VOCALIST  
NEW ENGLAND CONVENTION





That item was clipped probably from a Louisville paper, which got it from its country correspondent. By the time it reached Cincinnati it was reduced to possibly a dozen words. Ninety-nine readers out of a hundred who perused it at all had forgotten it ten minutes after.

The featurer read it, and for him it meant a page. The story of a hundred years of Shakerdom — one hundred years of the gentle “yea” and “nay” of the blue-eyed Shaker lass in the poke bonnet, the snowy apron and the slightly abbreviated skirt; one hundred years of Shaker quilts and Shaker blankets, etc., — made interesting reading.

That, however, might be written up from clipping-files but for the pictures. Every feature over a quarter of a column in length must have its pictures. In fact, features are often ordered, bought and sold on the strength of the camera's results.

In ninety per cent of the cases to-day, where a long manuscript is handed to an editor of any class of publication, before he attempts to read it he asks for the pictures. In as many cases, if an editor be sent a half-dozen catchy photographs, with the promise of the article *on approval*, he asks to see the article. After an editor gets to know a given man's style he orders absolutely from pictures.

It is an old trick of the feature writer to send an editor a certain number of photographs and ask him if he wants the article on approval, and if so, how many words.

Nor is the professional alone in this.

A trained newspaper featurer, looking through the albums of almost any amateur photographer, will find one, two and often a dozen pictures that tell a story which the public, the general public, is glad to read. In fact, it has often seemed to me a pity that more of these pictures do not reach the public. For example: about a year ago, on a trans-Atlantic liner, a young lady secured in the steerage the picture of a child whose mother persisted in addressing it as a monk, in keeping with a vow made at the time of the child's birth. That picture, as an oddity, aside from the personal interest to the photographer herself, will net her five dollars any day from any number of magazines. A solio print of her negative costs exactly five cents.

A leading New York daily offers a weekly prize of five dollars for the most unique picture shown; a great New York weekly that is practically a national weekly pays that amount for pictures containing a news interest. In every big city current events transpire weekly, affording the chance for such pictures.

Other pictures take well with class and trade journals. Even so prosaic a vacation as a summer in the country affords for him who knows the “ropes,” as the saying is, a chance to turn his camera into profit.

The trouble with the amateur seems to be that he does not realize the necessity for *sharpness* in making these pictures, and when he has a good subject, spoils it by careless work. He sends in dim, blurred, badly printed pictures,

or prints from a negative wholly over or under timed, to the largest illustrated magazine he knows of—one where, unless a man has already had work printed in the sheet, it must go through a long line of “readers” before reaching the editor; and it comes back. Discouraged at the loss in postage, he resolves never to attempt again, and usually he does not.

But let us return to the summer in the country. The passing peddler; the welcome itinerant with the tins on his back; the butcher’s wagon with the scales in the rear, from which all manner of luscious meats are sold; the girls out at the country fair; teacher and pupils of the country school—one and all have their market when brought out in a good picture. How far this market extends may be indicated by stating that the leading ladies’ magazine in the country, only a few years ago, printed an entire page of pictures of nothing more unusual than “little red schoolhouses” and their tenants.

Novelties of architecture, picked up by the kodaker on his rambles, “take” with the architectural trade-journals. A unique window display, original with its tenant, will sell to the trade-journals along that line of business, or to one of the mercantile magazines.

In fact, the camera, through the demand for all manner of photographs on the printed page, has become a veritable mine of gold, and the featurer is the only one so far who has seen fit to take practical advantage of it. He scans the paper constantly for hints of interesting events. Then he writes, perhaps, to the postmaster of some little Indiana village to inquire if there happens to be an amateur or professional photographer in his town. After securing the amateur’s address, he writes for pictures of the event in question at “so much *per negative*, on approval,” and when they come he makes his selection. Then he informs the nearest newspaper editor, or the editor of a large magazine, that he has “secured full control” of the “enclosed principals,” and asks how many words he shall send. If there is one editor in a baker’s dozen who can resist a dozen pretty, catchy, interesting pictures, along lines of interest to his subscribers, that one deserves editorial elimination. And the featurer makes the profit.

Without the camera, however, the business could not survive. It has been demonstrated, over and over again, that the reader of either magazine or newspaper will peruse but few things to the extent of even a column unless there are accompanying pictures. It has been further demonstrated that, whatsoever the subject, print some catchy photographs and the manuscript is read. Even the advertisers are appreciating this fact, and so we have the *art* of advertising.

Some day there will arise a school for teaching people how to take pictures which can be sold to the press. Then we shall have some good things indeed. Until then, however, the business is a unique one, and, like most unique things, keeps a going merrily.

*The very highest products of man's life in this world are his ideas and ideals.*

—MABIE.



C. H. CLAUDY

WHAT CAN BE THE TROUBLE?

## ACCIDENT AND INCIDENT

C. H. CLAUDY

**W**HEN you look back at your automobile tours, what is it stands out most strongly in the light of memory? Is it the scenery, the company, the weather, the trip as a whole? Or is it the little incident, the accident of the run — the by-play of your good time — which makes the memory clear and sweet to your taste?

You recall your first tire puncture, do you not? It was in a bit of wild country, approximately nine miles from anywhere, getting towards evening, and in the muddiest bit of road you had come to in the day's run. The machine kept riding harder and harder, the body hit the axle through the springs much oftener than you thought it should, considering the character of the road, and finally you stopped the car and got out to investigate. And there, sure enough, was the off rear tire as flat as a pancake, as if stepped on by an elephant. You took comfort in the thought that you had tires which could be repaired "with no other tools than these," a picture of a pair of hands vividly before you from a magazine page. So you hunted out the tire kit and went to work, according to directions. Far be it from your intention to say anything impolite about the framers of that alluring advertisement, but when you had worked and pried for half an hour and still the tire persisted in staying on, you know you had to confess, at least to yourself, that if no other tools than hands were needed, they

must be a different kind of hands than those you possessed; and you looked ruefully at your dirty digital members. And then your Good Samaritan came along, in the shape of a man in a car a mile or so high, so it seemed, and he very kindly showed you how to pry off the covering with the tire jimmy, and once off, how to patch the little cut, and then how to re pry the casing into place. It took even the expert another half-hour, and you resolved that the next automobile you invested in would have solid tires or mechanically fastened ones. And finally, as closing the incident, you had comfort from a bottle and a hearty handshake from the stranger — for the road and its troubles make all motorists kin — and you went on your way rejoicing.

If you remember one thing as being more common to motoring-trips than any other thing, it is the Horse with a big H, and the man who drives him, with a small m. Have n't you often been stopped on a smooth stretch of wide road by a wildly waving arm a quarter of a mile away, and waited patiently while father, mother and ten children tumbled like ants from a hill from an antiquated carryall, and the irate and much frightened man led a perfectly docile, broken-spirited beast past the car, the man rearing and plunging in fright, the horse so wrapped in his own affairs that he betrayed never a spark of interest in what ought to be an unfamiliar terror? How many times in a Sunday's run in the country do you have to stop and go and hold horses for frightened women? Of course it is legitimate and proper for the country owners to drive out on Sunday with their best girls, but it does seem as if all the horses coming towards you are colts and all those passing you from behind when you are standing still are old stagers in their dotage.

Once you caused a runaway, quite unintentionally, too; that is, the man said you caused it, but you are sure the automobile did n't scare the horse, but that it was a tree across the road a mile or so back. When the horse was finally captured and tied to the broken wagon you had to take the man to the nearest blacksmith and pay much bakshish to be allowed to proceed in peace. Do you remember?

It is not hard to recall the most vivid memory of all your trips. You were out by yourself, having a speed carnival all *to* yourself, and something went wrong. You did n't know what it was — you don't really know to this day what it was. You had to stop, because the engine said so, and you got out with confidence to investigate. First you looked at your connections. All right. You tried the spark. O. K. Then you primed the machine and yanked a few times at the starting-crank. Nothing happened but an eruption of perspiration. Then you laboriously and in turn cleaned four bright and shining spark-plugs, which needed nothing of the kind. Then you primed and cranked and cranked and primed again, and still the old thing would n't budge. Next, you smoked a cigarette and wished you were home, and then you looked longingly up and down the road for help. Your joy was beyond description when you finally espied another car, but when it came near you went busily to work and did n't look up as it passed by — the driver was



C. H. CLAUDY  
PSYCHE AT NATURE'S MIRROR  
A DRINK FROM A BROOK CROSSING A ROAD





C. H. CLAUDY  
THE LAZY MAN GIVES ADVICE ON TIRE REPAIRS  
WHY WON'T IT GO?



fair and slight and dressed in baby blue, and you were n't asking aid from such as she. You thought you heard a laugh as she went by, but it might have been the spark-coil buzzing. With a sigh you resigned yourself to an exhaustive investigation, and pipes were run through with wire, gasoline-tank sounded, valves looked into, and the hundred and one other things done which your experience, or the lack of it, indicated as hopeful. When you were through your "repairing" you cranked again, and lo and behold, at the very first turn of the crank, off went your engine! Of such whims are gasoline-engines made. Time lost, three hours and a half. Temper lost, all you had. Experience gained — who shall say? But you talked largely at the club of the difficult road-repairs you made; and if you wonder privately which of the many things you did righted the wrong, who shall blame you for concealment of your curiosity?

Anyway, you know you were not quite such an ass as the man *you* helped who had been half a day taking his engine to pieces to find the trouble and who returned scant thanks for your suggestion to pump some pressure in his gasoline-tank, but whose machine started, just the same, as soon as it had some gasoline in its insides to work with. No, you were n't such a fool as he was, anyway!

You will never forget what you and your friends always refer to as "the accident run"—not that you had any real accidents, but you had so many little things happen to you, and came so close to some bigger things. First you struck a mud-hole a quarter of a mile long, a mile or two deep and covered with water. You got half-way, and then your engine took a drink, *via* commutator, and stopped to digest it. You sat for an hour in the blazing sun waiting for it to dry, and then some one had to get out in the mud and crank, and straws were drawn. Of course you drew it — you knew you would. And you took a fiendish delight in wiping your muddy feet as much up and down your companion's legs as you could. You are bigger than he is. Then you came to a big tree square across the road, blown down by a storm the night before. It did n't delay you long, but you had a lot of fun pulling it out of the way and having the kodak fiend take pictures of you doing it, and when the rope broke and the man who had crowed over drawing the longest straw fell into a bramble-patch with full-grown thorns you felt an unholy joy. He felt something holey, but it was n't joy, you are sure.

Then you careered wildly and with rapture down a long smooth hill that looked as if it should go on forever, and only the motorists' bump of do-it-quick saved you from a bad spill. You caught a glimpse of your bramble-bush friend taking a flying leap from his seat, heard a warning yell and stopped just in time to avoid plunging, at twenty-five miles an hour, into a four-foot trench, sunken in the middle of the road. This ditch, you found on investigation, was caused by a badly made culvert which had settled with rain. If you were white no one said anything, on account of glass houses; but you had a warm glow of good-natured contempt for the jumper and a wee bit of enlarged cranium



C. H. CLAUDY

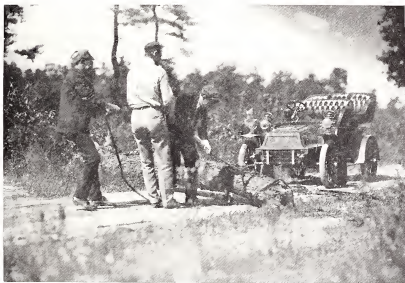
SPEED LAWS AND SHOTGUNS GO HAND IN HAND IN THE SOUTH

that you had stuck by the machine and averted trouble. And why should n't you? Next time you went down unknown hills with your eyes on the road, though, and thinking more of possibilities than probabilities.

It was on that run, too, that you were chased by constables in a little town of which you did n't even know the name, and, very improperly, and with no respect for law and order, as represented by some unknown speed law, you ran away. And that was the run on which you had the argument with the toll-gate keeper, as to whether or not you were a "heavy dray with four horses" or a "pleasure-vehicle carrying four passengers." Why the toll-gate man should have wanted to make you out a heavy dray you don't know, unless he needed the money; and to his contention that you weighed more than any dray he ever saw, you opposed the proffer of the legal fee. And when he declined to let you through — you just went through. You saw the hood would clear the gate, and you just lifted it up as you went under, throwing back at the irate man's feet the quarter the rates called for.

You have never been in a serious accident yourself, thank God; perhaps it was the down-hill experience with the ditch that made you careful, perhaps it was the accidents you have seen. Do you remember coming to a dismembered automobile tied to a telegraph-pole to prevent its escape and stopping to examine the damage? A man ran from a nearby house and besought you to fetch a doctor, as two half-dead motorists were inside and needed attention.





C. H. CLAUDY  
 A DISPUTE WITH THE TOLL-GATE KEEPER  
 REMOVING A FALLEN TREE-TRUNK FROM THE ROAD



So you scooted for town — a good-sized town it was, too — and fractured all possible speed laws, and when you arrived at the doctor's sign you were looking for you had a train of angry police at your heels. But your explanation caused them to look the other way, and, doctor on board, you raced back. He was a country doctor and not used to speed, and you saw him gasp as his hat went flying; but he had the grit of his class and never said a word. You took him to the scene of his labors in a little less than five minutes — and it was over two miles — and set him down with the comforting assurance that he did n't need to return so quickly. You stayed, of course, to find out what the matter was, and were relieved to know that you would have to attend no inquest. A broken arm, two ribs and a bad cut were the extent of the damages caused by a "non-irreversible" steering-gear — one of those man-traps which allows any rut or stone to steer the car. A rut it was, and a down-hill momentum, which sent two unlucky men straight into a tree, broke a wheel to splinters and changed the travellers into human rockets, the stars of which were only self-visible. No, you have never had an accident, but you may have, and so your face is serious when you think of your own escapes. But then, trolley-cars and railroad-trains have smash-ups, too, so you must ride and take the risk.

There are so many little happenings, hardly worthy of record, which make a trip good to talk over, afterwards, by a fire, with a pipe and a stein: the time you ran short of gasoline and hunted the countryside o'er for some — and finally paid fifty cents a gallon for four gallons of stove gasoline, which had water in it; the time you killed a turkey, which insisted in flying under your wheels — and your unsuccessful hunt for some one to reimburse (?) It was a tender turkey, too, you recall.

There was the time you were dared to run your car through a ford as fast as you could, and your foolhardy declining of the dare, on condition that if you did the other fellow paid for the dinner. Do it? Of course you did it — not once, but five times, for after being wet to the skin once a few more wettings did n't hurt. And how pleased you were that your good old engine kept as dry as a bone, for all the three inches of water in the tonneau, and never stopped her even running in spite of the spray and rain of water the wheels lifted up as you drove through the ford at twenty-five miles an hour. You would n't expect any one to believe this story, only you had a friend make pictures of it to prove your word.

You have a great advantage in telling your motor stories, owning a camera. If the road is unusually muddy, take a picture of it — then when that braggart Jones tells how he ran through mud a foot thick on the high speed you produce your photo and talk about two feet of mud. When you courageously drive to inaccessible places, such as Mt. Vernon, from Washington, D. C., and have to navigate cornfields and the beds of dried-up streams, in place of roads, and any one doubts you, take out a photograph of your car at Washington's home and prove them doubting Thomases without cause.

ON THE APPLICATION OF FARMER'S METHOD OF REDUCTION  
BY WHICH THE SHADOWS ARE PRESERVED AND  
ONLY THE HIGH LIGHTS REDUCED

JOHN BARTLETT

THE objection made, hitherto, to the so-called Farmer's solution for the reduction of too great intensity in the developed plate has been to the tendency of this agent to destroy the detail in the shadow parts of the negative, while acting upon the high lights; that is, the thin portions suffered inordinately while the denser parts were reducing.

It was for this reason that the Lumière Brothers advocated the use of ammonium persulphate as a substitute on account of its more harmonious action on the film; that is, attacking in preference the denser portions before acting on the shadows.

The ammonium persulphate undoubtedly does what is claimed for it, and in the majority of cases will be found to work effectively; but at times it is refractory, apparently not acting at all, even during a protracted manipulation, and on occasions acting injuriously upon the film by causing unevenness and stain or discoloration. Besides, its application requires considerable experience in manipulation to insure success, and also to preserve the plate from subsequent action which sometimes ruins the plate.

By a happy chance the writer was fortunate in discovering that the old stand-by, the ordinary so-called Farmer's solution, might be made under certain modifications to work as harmoniously as the persulphate; that is, to preserve the shadows while the high lights were reducing — with the further recommendation of its ease of manipulation and celerity of operation.

As every one who works in photography knows, Farmer's solution is composed of a mixture of ferricyanide of potassium and hyposulphite of sodium; saturated solution of ferricyanide potassium, one part; hyposulphite soda (1-5), ten parts.

The novelty of my method is only in the constitution of the solution and the mode of its application. My attention was first called to the modification by observing how much more readily and harmoniously a plate reduces when the operation of reduction is performed immediately after the fixing of the plate and before any of the hypo in the film has been washed out. We are all liable, at times, to overdevelop and to produce negatives which are harsh, dense and lacking in half-tones, and the fact is frequently patent to us on examination directly after removal from the fixing-bath. And so it is the practice of many of us to reduce our obdurate plate then and there, before we place the plate in the washing-tank. It was by noticing the better results so obtained that I was led to investigate the cause, and I found the reason to be that the unwashed plate had an excess of hypo in the film over the washed and dried plate reduced on the Farmer's solution made according to the old formula; that is, in order to get good results the hypo must greatly preponderate over the red prus-

siate of potash or potassium ferricyanide. When the ferricyanide is in excess the shadows suffer the most. So the whole solution of the problem for harmonious reduction is to have an excess of hypo. Now this might be told in a few words, and so I will briefly narrate my plan of manipulation, feeling assured that hereafter all who try the method will prefer the modified form of the Farmer's reducer to persulphite of ammonium.

On general principles it is best to reduce immediately after fixing, previous to washing, making the film acid with acetic or citric acid, and then placing it in a five per cent solution of ferricyanide of potassium, lifting the plate up out of the reducer after a few minutes' immersion to note the effect, for the action must not be allowed to continue too long or the shadows will suffer.

When sufficiently reduced, transfer immediately to the tap and subject the plate to at least five minutes' washing; for although ferricyanide is a very soluble salt, it persists some time in the film, and if allowed to remain will go on acting, and may thus carry the action too far.

When it is necessary to reduce a plate which has been thoroughly washed from hypo, the plan best to pursue is, first of all, to soak the film in a bath of weak acid, say ten per cent, for five or ten minutes, and then to transfer it to a bath of hypo for another ten minutes, and finally to the action of a reducer composed of hypo and ferricyanide constituted as follows: saturated solution of hypo, four parts; saturated solution of ferricyanide, one part; made acid with citric or acetic acid sufficient to redden litmus paper.

This method of reduction also lends itself kindly to the manipulation of paper prints — bromide of solio — for entire or local reduction of too great intensity. The paper print must be thoroughly saturated with hypo, rinsed slightly off, and then subjected to a diluted reducer constituted as above; that is, more water should be added, and for local reduction a tuft of cotton dipped in the solution may be employed upon the wet print.— *Journal of the Franklin Institute.*



## SUMMER'S AFTERMATH

AGNES LOCKHART HUGHES

AN empty nest 'neath the old brown eaves;  
A scarlet witch 'midst the maple leaves;  
And a farmer binding his golden sheaves —  
Where Autumn flaunts her red.  
The farewell note of a bluebird gay;  
A butterfly kissing his love good-day;  
A rainbow'd drift, where the flowers sway —  
And Summer's rose lies dead!  
Alas! The rose lies dead!



WILFRED A. FRENCH

THE HAGUE — KORTENAARS KADE

## A PHOTO-ERA TOUR IN EUROPE

(Concluded)

### BELGIUM AND THE NETHERLANDS

WILFRED A. FRENCH, PH.D.

THE Avenue des Champs Elysées, the Grand Opera House, the Art Gallery of the Luxembourg, Napoleon's Tomb, Sainte Chapelle, the Venus of Milo — what soul-stirring names in the realm of art! It seemed to us that between all earthly glories and Paradise the French capital was the connecting link. We were as if in a trance — dazed, intoxicated by the overpowering beauty of the works of man's creative genius. What a glorious climax this was to a tour prolific in sensations! But we remembered the fate of Tannhauser in the Venusberg and made a timely break for the Belgian frontier, finding refuge in the peaceful but charming Flemish capital. The general architectural aspect and art-schemes of Brussels reminded us vividly of the great city across the border, suggesting effects obtained by looking through the reverse end of an opera-glass. In pleasing contrast to the numerous modern structures of noble design — notably the imposing Palace of Justice — is the remarkably beautiful group of buildings of the mediæval period, which form the *Grand Place*. This square, where the graceful outlines and rich embellishments of the *Hotel*

*de Ville* blend so harmoniously with the quaint and variegated beauty of the Guild Houses, is a revelation of the builder's art.

As a classic, architectural gem of the purest ray, the *Grand' Place* of Brussels stands quite unrivaled. The five-aisled Cathedral of Sainte Gudule made a loving appeal to us by reason of its rarely beautiful and interesting stained-glass windows. Among the tombs within its sacred precincts was one which impressed us with singular force, because of its nobly significant motto: "*Plus d'honneur que d'honneurs*." Would that this modest expression were the shibboleth of the modern politician! We here observed that the large pipes of the organ rose each side of the great west window, which, being also otherwise quite unobstructed, permits the light to enter freely and light up the nave, even beyond the transept, a feature characteristic of but few cathedrals of the Old World, including those of England.

The monument to Counts Egmont and Hoorn — martyrs in the cause of human liberty in its most exalted sense — impressed us with the fact that this little country, as an integral part of the Netherlands, had suffered untold calamities under the bloody rule of Spain. How eloquently the struggle of this brave people is described by our own John Lothrop Motley, in his "*Rise and Fall of the Dutch Republic*"!

Bruges, Ghent, Liège, Mechlin, were temptingly near, almost in our path, and yet we were obliged to push on to Rotterdam, our port of departure for home. Of course we stopped at Antwerp, that wonderful city largely reclaimed from the effluvia of the Scheldt, which gigantic undertaking was planned and stimulated by Napoleon Bonaparte. Here the supreme art genius is Peter Paul Rubens. Although the Museum of the Fine Art displays upwards of twenty canvases by this extraordinary artist, it is the Cathedral where one must go in order to appreciate his full creative strength. Here we behold Rubens in the fulness of his powers — as the creator of masterpieces which must be classed among the world's greatest pictures. "*The Descent from the Cross*," which was familiar to us from childhood by engravings and photographs, rose before us in all its sublime beauty and power, verily a revelation of elevated expression, skilful composition and technical mastery, and exhibiting Rubens' wonderful genius in the most favorable light. Close by was the "*Elevation of the Cross*," which, though less exalted in conception, thrills by its portrayal of strong emotions and dramatic force. Still we found time to admire the interior of the Cathedral, grand and impressive, as it is; and the spacious nave, flanked by six aisles, three on each side, affording a perspective at once rich and effective. In the evening the magnificent square in front of our hotel, the *Place Verte*, was filled with an enormous concourse of people attracted hither by an open-air concert by the local Municipal Band. Selections as well as their performance were highly meritorious, and fully deserved the hearty expressions of approval from a discriminating audience, which also showed the strictest decorum throughout the concert. Those of us who had attended similar entertainments in America were tempted to make comparisons, but loyally refrained from expressing an opinion.



WILFRED A. FRENCH  
 SCHEVENINGEN — DISCUSSING THE TOURISTS  
 HAARLEM — VEGETABLE MARKET  
 SCHEVENINGEN — THE BEACH





WILFRED A. FRENCH

ROTTERDAM — THE ZALMHAVEN

And now the eyes of our little party were turned toward Holland, commonly termed "the land of canals and windmills." To the less superficial mind, however, the prospect of visiting this wonderful country was one of broader significance. We needed to turn but a few pages in the world's history to realize what an important rôle the Dutch have played in civilization, commerce, learning, politics and art — a people whose pluck and determination have been the admiration of the world. One has only to contemplate the vast system of irrigation, as well as the remarkable network of canals and dykes planned to hold a country, literally wrested from the sea, in order to appreciate the extent of Dutch energy, perseverance and resourcefulness. What a battle with the elements this brave people must have waged, to win the soil upon which they not only built their homes, but reared large and beautiful cities! That was when the Dutch took Holland. These were a few of the mental pictures that presented themselves as we sped across the Dutch lowlands towards Rotterdam. Here we established our headquarters, arranged our homeward voyage on the steamer "Noordam" six days later, and were ready for a "Dutch treat" of sightseeing. Our first indulgence was to photograph the novel and picturesque scenes afforded by native shipping. The low, staunch river-boats, with their broad, bulging prows, as they lay, in immense solid groups, in the basins assigned to them, took us by storm. The *Zalmhaven*, in particular, was one compact mass of boats of this type, and we



were favored with an excellent opportunity to observe the home-life that exists on board. Many of these boats harbor an entire family, yet there is abundant room, comfort and contentment. Cleanliness is scrupulously observed, for Dutch neatness is proverbial. Many of the children born and reared on these river-craft never set foot on terra-firma until they are well along in childhood. Indeed, we were told that many of these boat-dwellers had spent their entire existence on board their migratory domiciles, and without ever stepping ashore.

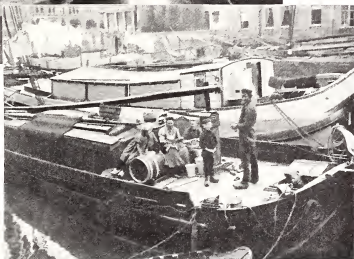
According to our program, planned to suit a pleasure-tour not exceeding five days, we started the next morning for The Hague. Although pleased with the appearance of the Dutch capital, so handsome, placid and immaculate, we took absolute delight in but one thing — the famous picture-gallery. While examples of Rembrandt's supreme genius may be found in all the great art museums of Europe, the collection of the *Mauritshuis* contains as many as twelve master-pieces, and these illustrate his early manner. Of these the most famous is the "Lesson in Anatomy." This picture is an excellent representative of his wonderful art, a triumph of concentrated expression and accentuation of tone. On the same wall hangs the master's "Presentation in the Temple," a striking effect in chiaroscuro and characteristic of his style. It would be difficult to explain how profound was our enjoyment of these extraordinary pictures, not to mention other superb examples of the Dutch school, notably works by Jan Steen, Gerard Terburg, Gerard Dou, Adrian van Ostade, Gabriel Metsu, Adrian van der Velde, Ruysdael, Vermeer and Paul Potter, the last with his celebrated "Bull." Rubens and Van Dyck were also represented by some of their best pictures.

A visit to The Hague includes an excursion to Scheveningen, a noted, aristocratic seaside-resort, about two miles distant. The place is laid out on a large scale, with an immense Casino, numerous fine hotels, a broad boulevard and an enormous pier extending into the sea — as becomes a resort of its rank. It was Sunday, and in the afternoon the young women of the near-by fishing-village, arrayed in the native costume, made their appearance on the boulevard. They formed a pleasing picture as they promenaded demurely along the shore, thronged, as it was, with fashionably-attired visitors. Now and then one of these fetching Dutch maidens would meet another, resulting in an exchange of confidences, followed by a merry peal of laughter — assuredly a most tempting subject for the camera. But not every amateur has the nerve to seize opportunities such as these. The fair subjects were on the alert, too; for the instant a camera was leveled at them, no matter how cautiously, they showed their unwillingness to be photographed by quickly concealing their faces, or screaming and running away. Try as we might, the shy, white-capped women of Scheveningen thwarted every effort to snap-shot them. One of the younger men of our set then tried personal persuasion, exercising his most ingratiating ways and even offering money, but to no purpose. Every ruse and expedient to attain our object proved unavailing. At last, when all hope had been abandoned, I resolved upon a bit of strategy, which all agreed was, at least, feasible. One of our camerists, who during these proceedings had kept in the background, was delegated to photograph a group of

these will-o'-the-wisps, but at a distance of about fifty feet. He was provided with a tripod camera. His preparations, designedly ostentatious and deliberate, at once attracted the attention of our lynx-eyed victims, who never suspected the villainy that was being perpetrated from another direction. Thus, while they were observing the movements of our confederate, I calmly made two exposures, which later proved to be successful. The knowledge that our European tour was practically at an end, and that in a few days we were to embark for our own native land, caused us to observe more carefully than hitherto the many little differences in custom, taste and deportment, as they exist here, among an exemplary class of people, and in the Great Republic. I have purposely refrained from expressing my views on this delicate subject, except on an occasion in Antwerp. My experience at certain popular watering-places in America has not been altogether flattering to their reputation, so much so, indeed, that I was amazed at the complete absence of the disorderly element on the beach at Scheveningen.

Although we realized that we were not in a country of magnificent distances, the nearness of the Dutch cities to each other surprised us. Rotterdam is only fourteen miles distant from The Hague; Leyden is eight miles beyond the latter; while eighteen miles separate Leyden from Haarlem. On the way to Haarlem we passed the ancient and historic city of Leyden, the birthplace of one of the world's greatest painters, Rembrandt Van Ryn, and, what specially interested us Americans, the place whence the Puritans embarked for America. Haarlem impressed us as severely dull, although famous for its horticulture; however, it yielded some of the most interesting pictures we took in Holland. The Spaarne River shapes its course in tortuous fashion, furnishing many grateful subjects for the camera. In many of these the cathedral or *Groote Kerk*, lofty and picturesque, is a conspicuous feature. The picture-gallery in the *Stadhuis* repays a visit, on account of its many excellent pictures of the Dutch school, the works of the merry Franz Hals, the greatest colorist of the Dutch painters, next to Rembrandt, being especially noteworthy.

The fact that only ten miles separate Haarlem from Amsterdam suggested the thought that, if located in America, these two cities would not long remain separate municipalities; some means would be found to consolidate them and establish a Greater Amsterdam. But when one considers that the soil here is sandy and weak, lacking a solid foundation, building-construction is a costly undertaking, as everything in shape of a solid structure rests on piles. This is specially true of Amsterdam, and a city more like Venice, in view of the great number of canals, it were difficult to imagine, except that this the commercial capital of Holland is far more picturesque. At least it so impressed us. As it rained hard most of the time that we were here, we devoted our attention chiefly to the Rijks Museum, a building of remarkable extent and stately beauty. In appearance, character and arrangement, this superb edifice is not unlike the South Kensington Museum, but its collection of paintings is of greater importance. It is the glory of Holland. Is not its most valued treasure Rembrandt's "Night Watch"? The propriety of this title has been seriously questioned, as it



WILFRED A. FRENCH  
 THE HAGUE — VEEN KADE  
 ROTTERDAM — LIFE ON A DUTCH RIVER BOAT  
 HAARLEM — VIEW ON THE SPAARNE



appears that the scene represented really takes place in daylight. Yet the fanciful name the picture has borne these many years will doubtless survive in spite of its incongruity. Although repainted and retouched, as it has been, doubtless, many times, it displays, in a marked degree, the salient characteristics of the artist's genius. Will not some capable and sympathetic artist perform for Rembrandt the service that Morghen rendered Leonardo da Vinci, when he engraved that master's "Last Supper," before it is too late? The art of photo-engraving, as developed within recent years, constitutes the best medium ever devised of faithfully reproducing the technical qualities of a painting. Yet, valuable as is this process, it is mechanical, and, having no soul, it lacks the personal element of the sensitive, sympathetic artist, as expressed by the etching-needle in the hands of a capable interpreter.

But as our artistic perceptions become clearer and broaden, we shall not remain satisfied with the present high standard, but make greater demands upon the technical skill in the arts and crafts, realizing that the effort toward higher ideals must be encouraged by the public. It is, therefore, not too much to say that the future photo-engraver will demonstrate the artistic possibilities of his art in a way that shall place it on a level with the etching of Rembrandt and Whistler. In such an event he will perform his task *con amore* and impart to his work a distinct individuality, expressive of his artistic instincts, poetic fancy and personal idiosyncrasies — the same as the etcher or painter. At the same time he will raise photo-engraving from the present level of a purely mechanical process to the high plane of a distinct and noble art. Then the photo-engraver will appear in the rôle of an interpreter, giving his version of, let us say, "The Night Watch," of which no adequate reproduction exists in painting, engraving, etching or even photography. It is easy, then, to anticipate the dawn of a new era in the world of art. Names will spring up that will rival in brilliancy those of the greatest exponents of the etcher's art.

After enjoying the art-treasures of the Rijks Museum for two whole days, we returned to Rotterdam. Here we embarked on the steamer "Noordam" for New York.



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## EDITORIAL DEPARTMENT

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### OCTOBER

OCTOBER, full of exhilaration, of beauty and of joy, is the ideal outing month for the camerist. To all who can read the lessons of nature aright, under an October sky, there are pictures without number. October air is like wine in its effects, for, after the frost has been injected into it, it fills you with exhilaration and the spirit of adventure. Everything glistens in the purified atmosphere. The hills sparkle and the water fairly laughs and dances before your eyes with dazzling brightness. Once in the open, you make instinctively for the woods and the hills to drink in the loveliness of the scene. The very landscape seems to sparkle and effervesce as if some rare change were taking place, after the lassitude of the summer. There is color, too, in the landscape, a glory on the hills and such a beauty in the sky as is rarely to be seen. Yet it must be seen and felt to be rightly appreciated. There are color surprises where the hoar frost has touched the hills, making them sparkle and glitter. The stain of vivid red in the woodbine, the gleam of scarlet leaves against the bare white wall of rock, the rich carpeting of yellow leaves in the fields and woodlands, form a picture well calculated to gladden the soul of the true artist. How to translate these charms of nature to the sensitive plate is the problem set for the photographer during this month.

### KODAK EXHIBITION

THE amateur photograph craze has struck Boston good and hard and has produced a profound impression. Since the arrival of the Kodak Exhibit, in charge of the eloquent Dr. Dixon, we have been experiencing the first throes of the Kodak fever. The exhibition of photographs at the picture gallery in Copley Hall, on Clarendon Street, has drawn large crowds which have quickly caught the contagion. Everybody seems to have a camera, either a Century, Premo or a Kodak outfit, and they seem to take a delight in snapping everybody else in Boston. The Tech. students who follow the special course in photography at the Institute are getting very cheery, vying with the Harvard boys in a bloodless campaign for pictures of Spotless Town. Even the girls at the Art Schools have caught the fever and if a person stops to talk with another on the street, dozens of Brownies and folding pocket Kodaks are snapped in a jiffy, and we have, a little later, dozens of prints floating around the Back Bay district, of Hollis Codman talking with Billie Hunnewell's wife—an amateur photograph by Amelia Ketchem. If the sober District Attorney of Suffolk County comes down Columbus Avenue, from his home at The Navarre, instantly there is a volley of shots from invisible cameras, and the next day we have pictures of the plumed knight accepting the Prohibition nomination for Governor. The camera is no respecter of persons, even the clergymen of Spotless Town

are snap-shotted. When the Boston parson stops to talk with a young man upon the street his picture is taken and labeled "The Reverend Dr. So-and-So Converting a Tough Character." And so the craze goes on until it has come to such a pass that the average Bostonian cries aloud to heaven for vengeance against the Kodak fiends and is thinking of petitioning the authorities for protection. But there is another side to this story that is more pleasing and attractive, for the Kodak Exhibit is a genuine study in photographic art. The entire walls of the hall are filled with the products of the Kodak, constituting a collection of pictures that cannot be equalled anywhere in this country. Some of the most beautiful are the work of Queen Alexandra of England, whose seascapes, and fine cloud effects, taken in the Highlands of Scotland, reveal rare artistic perception. There is a fine study of "Sunrise in the Mediterranean," bearing witness to her early morning habits of rising, as well as to her exquisite taste in photography. Such work as this is a credit to the Eastman Kodak Company, who have planned the exhibit and who are doing so much to make a study of their business, "Kodakery for Art's sake."

### WOOD-ENGRAVING AND HALF-TONES

THE half-tone process is undoubtedly the best reproduction process for the photograph where expense is a factor. Pen-and-ink and wash drawings are perhaps best reproduced by line-engraving, because this process retains all the strength of the lines in the picture. But in the half-tone the photographic image is mechanically resolved into a printing-surface of lines broken up by dots, equivalent in their effect to the intensity of the color required. In this way, the gradations of light and shade are more continuous, and when the engraver finishes the plate, by cutting out the high lights, by lightening the half-tones and by burnishing down the dark shadows to make them print solid, he produces an effect which for delicacy and truthfulness is even better than the wood-engraving. In fact, it may be stated that the glories of the whole nineteenth century school of wood-engraving have vanished before the half-tone. One sees nothing else in pictorial printing. Occasionally, but at rare intervals, in one of the magazines, one comes across engravings by Henry Wolfe or Timothy Cole, but they only serve to preserve the memory of an art that is dead.

### PHOTOGRAPHY AND ADVERTISING

WE have often insisted in these pages upon the usefulness and value of photography as applied to advertising. There are boundless possibilities opened up by modern engraving, in the advertising field, in which the camera plays a necessary part. The field cleared by relief work is as yet hardly furrowed, and the advertising field itself generally furnishes an admirable outlet for the ingenious photographer, amateur and professional. The PHOTO-ERA is scanned for ideas each month by many clever amateurs, and we are desirous of encouraging them to study the possibilities in advertising. Some of the most effective advertisements ever produced were made so by the use of

good photographs. Nothing has helped modern advertising more than photography. Advertising is a business force that, within the last fifteen years, has developed into a science. It is, if properly pursued, a legitimate and honorable way of focussing one's business in the public eye, to the benefit of both the advertiser and the public. It is a science as surely as political economy is a science. Its development depends upon Art as certainly as that of any other science. Advertising matter, if properly prepared, is sure to be read. The public looks with ever-increasing respect and interest on the man who advertises well. If you are a good photographer — and you probably are, since you are wise enough to read the PHOTO-ERA — it is your duty to yourself and to the public to let the public know that cheering fact.

### LITTLE RIVERS

**A**MONG all the books of interest to the angler, we know of none perhaps better than "Little Rivers," by Henry Van Dyke. In his article on "Ampersand," which name belongs to a mountain, lake and river in the heart of the Adirondacks, we find that he is not only a disciple of Izaak Walton, but a photographer as well. "After we had feasted upon the view as long as we dared," he writes, "we unpacked the camera and proceeded to take some pictures. If you are a photographer, and have anything of the amateur's passion in your heart, you will appreciate my pleasure and my anxiety. Never before, so far as I knew, had a camera been set up on Ampersand. I had but eight plates with me. The views were all very distant and all at a downward angle. The power of light at this elevation was an unknown quantity, and the wind was sweeping vigorously across the open summit of the mountain. I put in my smallest stop, and prepared for short exposures. I set my instrument, sighted the picture through the ground glass, and measured the focus. Then I waited for a quiet moment, dropped the plate, moved it carefully forward to the proper mark, and went around to take off the cap. I found that I already had it in my hand, and the plate had been exposed for about thirty seconds with a sliding focus. I expostulated with myself. I said, 'You are stupid, you are unworthy of the name of photographer, Light-writer! You ought to write with a whitewash brush.' The reproof was effectual and from that moment all went well. The plates dropped smoothly, the camera was steady, and the exposure was correct. What good pictures were made to recall, so far as black and white could do it, the delights of that day! I reckon among my most valuable chattels the plates of glass on which the sun has traced for me (who cannot draw) the outlines of that loveliest landscape! Mark that day, Memory, with a double star in your catalogue." It is interesting to note that this occurred twenty-eight years ago, and that his instrument was a Tourograph, a camera with a plate-holder on the top of the box. The plates would drop into a groove below and then move into focus — after which the cap was removed and the picture made. Think of the possibilities to-day with the improved apparatus, plates, lenses and paper, and the bubbling, forceful enthusiasm of a true sportsman like Dr. Van Dyke.

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## THE ROUND ROBIN GUILD

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*Conducted by Elizabeth Flint Wade. Specially designed for the amateur photographer and the beginner. Membership may be obtained by sending name and address to the PHOTO-ERA.*

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"FINE new buildings and scientifically arranged collections are by no means unfamiliar in this new and enlightened age," says a writer in a recent number of *Scribner's Magazine*, "but the flavor of antiquity is becoming rare, with silence and aloofness, and the mystery of strange things seen in dusky corners." While lamenting the fact that old things are passing away, he adds that it "is well that there are historical societies to preserve records of facts which otherwise would be denied by the historian."

That is just what the Historical Picture Guild is now doing — preserving a pictorial record of historic facts, so that in time to come, when the facts themselves no longer exist, there will be the *semper paratus* evidence that they once existed, which cannot be denied.

Is it not to be deplored that we possess no good photograph of the old Charter Oak, which fell just fifty years ago the twenty-first of August? There is a painting of the tree made by one C. D. Brownell for the Hon. Marshall Jewell, and a picture taken for the Hon. I. W. Stuart on the morning of its fall. Mr. Stuart owned the place in front of which stood the tree. By his order the fallen tree was draped with the American flag and guarded throughout the day from relic-hunters who would have stripped it almost root and branch. Toward evening a band was stationed near the tree and played dirges for the passing of the monarch, and at sunset all the bells of the city were — by order of the authorities — tolled as if for some public character.

The President's chair in the Senate chamber is made from the wood of the charter oak, as is also the frame of the case which contains the state charter.

The age of this historic tree was estimated to be at least a thousand years. It was venerated by the Indians and told for them the time of the planting of corn, for when its leaves had attained the size of a mouse's ear then was the time to put the seed into the ground.

There are other historic trees — mention has been made of several in a recent number — and we still lack pictures of some of them for our Guild collection. Let those of us who can, be up and doing, and secure pictures of these old trees before they too succumb to the touch of Time.

Members are specially active just now, and the call for pictures of historic houses has brought many responses. Among those of special interest are several pictures of the Wayside Inn. These were made and sent to the Guild by Professor George Jepson, and are most excellent, being clear and full of detail.

One cannot be too zealous in this work, and we wish every member of the Guild would contribute some one picture during the next month. We shall have much of interest to communicate in an early number in regard to the future of our Guild, which grows apace.

We want more members, and every one interested in this department of the PHOTO-ERA is asked to send in name and address. There are no fees nor dues, an active interest in the work being all that is required.

### OZOTYPE PRINTING

Have you tried printing by the Ozotype process? If not, then you have before you a most fascinating experiment — and not an experiment either, for the print is almost sure to be a success. In



fact, a failure is due only to the carelessness of the amateur, not to any deficiency in the method.

It is a process which in result is fully equal to carbon prints. It has all the artistic beauty of the gum print without the uncertainty attending the making. In fact, for an artistic medium for printing, the Ozotype deserves a place in the methods of every amateur who desires to produce something worth while in the way of prints.

The first thing which commends this paper to the amateur is that the image is visible, so that one may judge the depth of printing required in the same way as he does any printing-out paper. The second is that one may make a number of prints when the weather is bright and then finish them up at his leisure. As soon as these, which for a better name might be called "foundation prints," are made and washed they become insensitive to the action of light, and all other treatment may be conducted in a good light.

Any paper adapted to the negative from which the print is to be made may be used for the printing. It is sensitized with the solution specially prepared by the makers of the paper. This solution may be applied either with a broad flat brush soft enough to avoid any roughening of the paper, or one may take a good-sized bunch of surgeon's cotton, wrap it in a piece of fine, soft flannel, and use it to apply the solution. If applied with a brush the operation must be done quickly, using plenty of the solution in the brush, and brushing first one way of the paper, then at right angles with these brush-marks, to insure an even coating. If the flannel is used a small quantity of the solution is poured on the paper and quickly spread over the surface with light touches.

If the papers chosen are the water-color papers, such as Whatman's hot-pressed, Michallet, Allonge, etc., they may be sensitized without previous sizing. In fact, most prints look better made on unsized paper.

When the paper is sensitized, which may be done by gaslight, the sheets are

cut up in suitable sizes for prints, wrapped in non-actinic paper, and stored in a place free from dampness.

To print, place in the frame and carry the printing just far enough to show detail in the high lights. The print is taken from the frame and placed in running water and washed for about ten minutes. Too long washing is apt to spoil the print. As soon as the washing is completed the pictures are pinned up to dry, and in this condition may be kept indefinitely.

The worker is now at liberty to select the color in which he wishes to finish any or all of his prints, coat the paper with the prepared solution and conclude the process by producing most charming pictures both in quality and tone.

The pigment used is the moist water-color in tubes, and one or more colors may be used, as desired. To make a sepia tone use burnt umber and Venetian red; for a warm black use lampblack and burnt sienna. One can use lampblack alone for cool grays and blacks. The paints are mixed with gum arabic, the proportion being one ounce of gum arabic to two ounces of water. Mix the colors with a little of the gum and rub and stir till smooth, then add more of the gum, say an ounce for half a dozen prints. Make up a solution of sulphuric acid and sulphate of copper, using one and one half drams of sulphuric acid, four ounces of sulphate of copper, and twenty ounces of water. This is a stock solution and keeps indefinitely. To use, take three ounces and add to it thirty grains of hydrochinon. Mix with it the gum solution containing the pigment, and with a wide, moderately stiff brush—a flat hog's-hair brush will be found excellent for the purpose—spread the solution over the paper, covering the surface as evenly as possible.

Directions tell one to pin the paper in a damp cupboard; but such a receptacle is not always to be managed, so take a large wooden box—a soap-box will answer every purpose—pin the prints on the bottom and sides, set the box over a basin of water, cover the box with a blanket, and leave it for an hour.

To develop, place the print face down in a dish of water and let it remain five minutes. Turn face up and place on a sheet of glass, and with a soft badger's brush dipped in water brush the surface of the picture, keeping the brush wet continually. The picture will presently appear, this time in color of the pigment used. The development is continued until the proper gradation of lights and shadows is reached; the print is then rinsed, drained and hung up to dry.

Once having become familiar with the making of Ozotype prints, the artistic worker will be very much inclined to "use no other."

#### VIGNETTED PRINTS

It often happens that there are objectionable parts of a picture which, if trimmed away and the rest of the print trimmed to correspond, spoil the picture entirely. It may be dense, heavy shadows in one corner, which give an ugly mass of shade where shade is not desired, or there may be strong high lights at one side leading the eye away from the principal objects in a picture. Whatever is to be thus eliminated from the print must be done by means of vignetting.

The definition of a vignetted picture is "One in which the outlines of the edges gradually fade away and finally blend with the white of the paper."

There are several ways of vignetting pictures. There are the commercial vignettters, one kind consisting of fine onion-skin paper on which is a lithographic design graded from the edges toward the centre, which is left white. This paper is placed over the picture during the process of printing, and can be so arranged as to cut off from the light those parts of the print which one does not wish to have printed. The objection to this style of vignetter — which, it must be admitted, is a very handy one — is that the finely graded lines drawn from the opaque part to the clear paper in the centre, print on the sensitive paper and mar the effect.

Vignetting-glasses are more satisfactory than the papers. The vignette is made on an ordinary sensitive plate. In the

centre of the plate is an oval or round space where the film is very thin and transparent. From this opening the film gradually grows denser and denser, until at the sides and ends it is quite opaque. Such glasses cost thirty-five cents each, and with one having a medium-sized opening and one with a smaller opening one can combine and make almost any shape of vignette desired. To use the vignetting-glass it is first placed in the printing-frame, then the negative adjusted over it, the paper put in place and the whole exposed to the sun until a proper depth of color has been secured.

So much for the commercial vignettters. Those quite as effective and costing nothing whatever may be made from paste-board box-covers. Outline on the cover a figure which corresponds in size and shape with the portion of the negative to be included in the picture. Make several cuts inside this outline, then tear away the pasteboard along the outline, peeling the paper so that it will be thinner at the edges of the opening, and over the opening paste a piece of onion-skin paper. Place the negative in the printing-frame with the printing-paper as for ordinary printing. Now take the prepared cover and adjust it over the printing frame so that the opening comes over the part from which the print is to be made, holding it in place with stout rubber straps. With a vignetter it is better to print in the shade rather than in direct sunlight, for unless the frame is placed at the right angle the sunlight enters the opening obliquely and the vignetted part of the picture is in the wrong place.

Another kind of home-made vignetter is made on a sheet of ground glass. The shape of the vignette is marked on the glass, then all outside of the outline painted with Gihon's opaque or Strauss's marl. The glass must be raised from the printing-frame during the printing-process, and the simplest way is to take a box-cover, cut an opening in it a little smaller than the glass itself, lay the glass on the top of the cover over the opening, and hold in place by means of strips of passe-partout binding.

The paint must be applied very thickly, so as to block out all light except that which enters through the clear part of the ground glass. When the paint is dry take a small wad of surgeon's cotton, slightly moisten it, and work off the paint along the edge of the opening, making it thinner and more like the regular vignetting-glass.

As the paint is in water-color it can be removed and other shapes made on the same glass.

While it is not to be denied that a picture which may be trimmed at right angles and mounted on a proper paper is the most desirable, still one may make very pleasing pictures by vignetting judiciously, and evolve an interesting print from a negative which would not lend itself to any other style of printing.

#### ROUND ROBIN GUILD COMPETITIONS

First prize: Value \$10.00.

Second prize: Value \$5.00.

Third prize: Value \$2.50.

Prizes may be chosen by the winner, and will be awarded in photographic books or magazines published or advertised by us; in enlargements, art portfolios of photogravures, mounts, or other photographic materials advertised by us; or, if preferred, we will send any article of a photographic or art nature which can be bought in Boston for the amount of the prize won.

#### RULES

Membership in the Round Robin Guild, with all its benefits — among which the correspondence privilege probably stands first — is free to all, and we invite every photographer to become a member. Entrance in the monthly competitions is also free to all, whether subscribers to PHOTO-ERA or not.

#### SUBJECTS FOR COMPETITION

September.—“Flower Studies.” Closes October 31.

October.—“Rainy Day Scenes.” Closes November 30.

November.—“Harvest Scenes.” Closes December 31.

#### ANSWERS TO CORRESPONDENTS

F. S. A.— Litmus paper is used for testing solutions to determine the acidity or alkalinity of photographic solutions. Red litmus paper turns blue when placed in a solution strong in alkali. Blue litmus paper turns red when placed in a solution strong in acid. When the solution is neutral — that is, does not contain more of the acid than of the alkali — the paper remains unchanged in color.

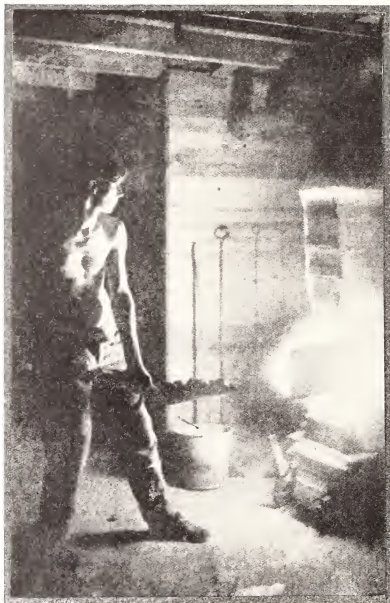
Dr. H.— You can manage to fill plate-holders without a red light if you observe the way in which the plates are stored in the box. They are placed in pairs, film sides together. When the box is first opened the first plate removed will be film side down, the second plate film side up. Remembering these facts, it is easy to pick up a plate and adjust it in the plate-holder without the red-lamp to distinguish the sensitized side. Another way to distinguish the film side, though not so reliable, is by touch, the film side being much smoother than the glass side of the negative.

HAROLD N.— You are evidently suffering from metol poisoning, which is not serious, but very annoying. Consult your physician and have him make you up a zinc ointment. Local treatment will soon cure the trouble.

Miss D.— To make a line-drawing of a bromide print go over all the parts of the picture which you wish retained with a fine drawing-pen and waterproof ink. When thoroughly dry dissolve away what is left of the image by immersing the print in a bath made of five ounces of water, one ounce of hypo and ten grains of ferricyanide of potassium.

R. S. W.— Prints may be made on printing-out paper and developed in the same way as a negative. Print until a faint image appears, then remove from the frame and develop in metol or hydrochinon developer until of sufficient depth.

C. E. A.— Notices of exchanges are made in this department free of charge to all members of the Round Robin Guild. If it is desired to have the notice repeated a small fee is charged for the second notice.



PAUL FOURNIER  
FIRST PRIZE — GENRE PICTURES



GENRE PICTURES — AWARDS

First Prize: Paul Fournier.

Second Prize: H. F. Robinson.

Third Prize: Robert E. Weeks.

Consolation Prizes: Paul R. Morrison,  
F. E. Bronson and J. H. Field.

Honorable Mention: Wm. S. Adams,  
F. E. Bronson, Jessie R. Dixon, Addison  
P. Center, J. H. Field, Julia F. Elton,  
R. H. Buchanan, Hattie J. Goodnow,  
Jean M. Hutchinson, Grace E. Mounts,  
George K. Muntz, Paul R. Morrison,  
Florence Marie Roberts, A. L. Smith,  
W. R. Sysson, W. J. Scales, H. E. Stout,  
C. R. Tucker, Mrs. E. E. Trumbull,  
James Thomson, W. F. Robinson, George  
B. Ritter, C. M. Whitney, Robert E.  
Weeks, T. L. Venning and Sarah Weaver.

It was a very hard matter for the judges  
to award the prizes in the pictures sub-  
mitted to the Genre Competition. As it is,  
three Consolation prizes have been awarded  
to members whose work was specially  
good and of almost equal merit with that  
which won the regular prizes.



H. F. ROBINSON

SECOND PRIZE



ROBERT E. WEEKS

THIRD PRIZE — GENRE PICTURES

# The Crucible

## THE QUANTITY OF DEVELOPER

Only enough developer should be used to cover a plate as it lies in the tray. A small quantity will produce a more vigorous negative than a large quantity. Too much solution may cause uneven density or air-bells unless very carefully handled. Frequently this same fault produces an almost entire reduction of the silver in the plate emulsion, resulting in an image of great density. In such cases the following clearing-solution will be found of advantage:

Water.....	10 ounces
Ferrous sulphate .....	1½ "
Alum .....	½ "
Sulphuric acid .....	20 minims

## HOW TO FOCUS FOR MAXIMUM DEPTH OF FIELD

When using a camera we are often desirous of focusing so as to obtain a maximum depth of field, and we therefore give below a table showing what point to focus on so as to obtain this maximum.

If we focus on any of the distances given in the table we shall find that half that distance is the nearest point in focus, and that any distance beyond the nearest point in focus is also in focus.

The stops for which the table is constructed are those usually marked on lenses of British make, and the table can be used for any lens whose stops are marked in the customary manner with the ratio values.

The table is somewhat similar to that constructed by the illustrious Sir D. Salomons, of electric fame; but as neither his table nor that of Dr. J. J. Higgins gives stops  $f/4$ ,  $f/32$ , nor the intermediate stops,  $f/5.65$ ,  $f/11.313$ , and  $f/22.627$ , we think the table will prove to be of considerable value, as these stops are in constant use by photographers.

In fitting a lens to a hand camera, the lens should be fixed for the distance given

in the table under the heading of the largest stop the lens has, although it is still better if the lens is not at a fixed focus, but is fitted with a rack attachment for focusing. In the latter case we can always put the lens at the fixed focus distance for general use, and bring the rack-inning movement into use whenever it is required for near objects.

Table of Distances on which to focus so that all objects beyond half that distance are in focus. Disc of confusion taken as 1-100th of an inch. Distances given in feet:

Focus of Lens in Inches	Ratio Values Marked on Stops						
	$F/4$	$F/5.6$	$F/8$	$F/11.3$	$F/16$	$F/22.6$	$F/32$
	Distances on which to Focus for Maximum Depth of Field, all beyond half these Distances being in Focus						
ins.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
3	10	13	9	7	5	4	3
4	33	24	17	12	8	6	5
4.5	42	30	21	15	11	8	6
5	52	37	26	19	13	10	7
5.5	63	45	32	22	16	11	8
6	75	53	38	27	19	13	10
6.5	88	62	44	31	22	16	11
7	102	72	51	36	26	18	13
8	133	94	67	47	33	24	17
9	160	119	94	60	47	30	24
10	208	147	104	74	52	37	27

With lenses such as the Unar lens of Zeiss it is necessary for accurate work to focus with the stop one will use for the exposure, but with symmetrical combinations such as the two-foci Protar lens of Zeiss it is not necessary.—*English Amateur Photographer*.

## A PRINTING HINT

Bright light tends to reduce contrast, and for this reason hard negatives should be printed in sunlight. Weak negatives will retain all their strength if printed in the shade, or if in sunlight, under green glass or two or three thicknesses of tissue paper.

These have already been given in a recent number of the Library series of *The Practical Photographer* but are here repeated in a condensed form, as the matter is one of considerable importance and frequent interest.

(1) A five per cent solution of silver nitrate is added and the mixture heated: a brown or yellow precipitate.

(2) A cold saturated solution of mercury bichloride: a white precipitate or milky appearance.

(3) To starch solution, add a few drops of ten per cent solution of potassium iodide containing iodine, yielding the familiar blue iodide of starch: the color is discharged by hypo.

(4) A solution of potassium permanganate and caustic potash or soda: hypo discharges the pink color.

(5) Hydrogen is evolved by hydrochloric acid and zinc in the hypo-suspected solution: if present, hydrogen sulphide is formed and its presence indicated by the usual lead acetate paper.

(6) A solution of potassium ferricyanide is added; to this is added a solution of ferric chloride: hypo indicated by green coloration. For details of these tests the reader may turn to *The Practical Photographer*.

#### STAINS ON P. O. P.

The photographer is frequently troubled with brown stains on the clear part of his P. O. P. post-cards and prints, after toning and fixing, but is unable to find out the reason. A mere trace of iron in the water, or the least rust in the washing-bowl are sufficient to account for it.

A very good, if it be not the only, way to remove these stains is to soak a piece of cotton wool in moderately strong ammonia (one part ammonia, .880 to three parts water), and with it gently rub the offending mark until it is removed, taking care not to injure the film. It is best to do this when the print is dry.

The method is very useful also for cleaning P. O. P. which has become stained through prolonged keeping.—*Photography*.

Photographing statues and monuments furnishes an excellent opportunity for specializing if the worker cares for that sort of thing. Objects of this kind are usually in open places such as squares and parks, where there is comparatively no restriction as to the focal length of the lens, as is often the case in ordinary architectural work. In order to get the most pleasing perspective it is therefore desirable to use a lens of longer focus than usual and choose a point of view at some distance from the object, preferably at a slight elevation from the surroundings if the monument happens to be tall. A long-focus rectilinear lens is best suited to the work, but if one possesses an anastigmat one of the single combinations may be used quite successfully if stopped down to about  $f/22.6$ . The surroundings must be given careful attention, especially the background, which is usually sky. The importance of this becomes evident after a moment's thought, for if a white statue is photographed against a blue sky both appear white in the print and there is not sufficient contrast. Cloudy days are therefore better for this work, and orthochromatic plates should be used for the best results. It will be found that the clouds take pleasing forms and furnish an admirable background. Not only this, but if the subject happens to be a statue the rounding, modeling, softness and detail will be much improved. Direct sunlight always throws unpleasant shadows under the eyes, nose and chin, and so the worker must choose a point of view and a suitable lighting with all the care and study which a portrait artist gives his sitter. Dark statues, such as bronzes, appear to better advantage against a lighter background, such as blue sky, or, better still, fleecy white clouds. There are days when the sky is full of them, and then is the time to go bronze-hunting, fully equipped with orthochromatic plates and a ray filter. Find the proper point of view and wait until the sun is obscured for a moment by one of the many clouds, so as to secure good modeling.

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# The Filter

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## BRIEF BUT TO THE POINT

The following telegrams recently passed between a dealer and a customer:

Photographer.—“Please ship at once a case of plates.”

Dealer.—“Can't ship until last case is paid for.”

Photographer.—“Cancel order. Can't wait so long.”

## TRIALS OF POVERTY

Artist (to landlord).—“I can't pay my rent, but I can give you a lot of canvases as security.”

Landlord.—“All right; I'll take them if you have not painted on them.”—*Familie-Journal*.

## BOTH DEPARTED

John Inglis, the crop expert, of Minneapolis, had been describing to a reporter some of his forecasting methods.

“Simple methods give always the best results. You know the story of the parlor-maid and the two young men? Well, a certain clever parlor-maid hurried to her young lady one evening and said breathlessly:

“‘O Miss Fanny, both of them young gents you are engaged to has called, and they 're in the parlor together, and, somehow, they 've found out you 've been false to each, and it looks to me as if there 's going to be some terrible trouble.’

“‘What shall I do? What shall I do?’ Miss Fanny moaned, as her powder-puff dropped from her nerveless fingers.

“‘I'll fix it,’ said the clever maid, after a moment of deep thought. ‘I'll go and say you 're crying your eyes out because your pa has lost all his money. Then you can keep the one what stays.’

“‘Good, good!’ Miss Fanny cried.

“The maid withdrew. Some minutes passed. Then she returned with a scared, awed face.

“‘Both gents is gone,’ she said.”—*Exchange*.

## IT WAS “TIGHT” CAME OUT

Back in the eighties one of our Chelsea celebrities was “Tight” Howe, always looking for a chance to perform deeds of valor, always boasting of his courage, and really having more sand than judgment.

With “Tight” could always be found a semi-sporting element, knowing there would be “something doing.” One night in passing a saloon where there was a great deal of noise “Tight” halted his admirers and said, “Boys, stay right here, and I'll go in there and throw 'em all out, and one of you count 'em as they come.” In he went. In a few minutes out came a man through the window, sash, glass and all, and one of the crowd yelled with all his might, “One.”

From the gutter came “Tight's” voice, saying, “Stop counting! Stop counting, you d— fool; it's me that came out.”—*Boston Herald*.

## HE FOUND THE HOLE FIRST

There are times when differences of rank do not count, and an Irish soldier is said to have chanced upon one of them during the late war in Cuba. He was discovered by the sergeant of his company in a hole, well out of the way of even a stray shot, when he should have been engaged in active service.

“Get out of that hole!” commanded the sergeant sternly. “Get out quick!”

The broad Irish face looked up at him, with stubborn resistance written on every feature.

“You may be me superior officer,” he said boldly, “but all the same Oi'm the wan that found this hole fir-rst!”

## STILL STRANGERS

Alice.—“Were you introduced to him the first time you saw him?”

Dolly.—“No. The first time I saw him was when the car lurched, as I was standing up, and I sat down in his lap.”



## NOTES AND NEWS

### THIRD AMERICAN SALON

WE wish again to announce that all entries for the Third American Photographic Salon must be in the hands of local jurors by Oct. 30, 1906. For full particulars see the September PHOTO-ERA.

### EXHIBITION OF THE ROYAL PHOTOGRAPHIC SOCIETY

THE Fifty-first Exhibition of the Royal Photographic Society opened in London, England, September 19, and will continue until October 27. It is, by general consensus of opinion, the finest and most representative collection of photographs ever shown in London—a distinct step in advance, particularly in the Pictorial Section, although elsewhere there is certainly no drop in the high standard of excellence, and possibly an advance has been made. Comparisons with the Salon are inevitable, and the opinion seems to be that the Royal is an exhibition of photographs, the Salon of photographers; that the Salon excels in decorative art, but that the work of the Royal has a better claim for recognition among the fine arts.

In the pictorial section, 276 pictures, 32 more than last year, were hung. As the entry was unusually large this year and fully 75 per cent were rejected, those who were more fortunate may well congratulate themselves. About 80 pictures are from Europe and America, which is represented by such names as Samuel Holden, Dudley Hoyt, Pirie Macdonald, Louis Fleckenstein, Katherine Bingham, Hana Robinson, Jeanne Bennett, Adelaide Hanscom, Belle Johnson and W. H. Porterfield.

There are only a few examples of color photography and the subjects would have been better in monochrome, which goes to show that artistic color photography cannot be obtained until pure pigments are to be had.

That portion of the exhibition devoted to technical and scientific photography is especially interesting, perhaps better and more representative of the many applications to which photography may be put than at any previous exhibition. Various collections by men well known in their respective professions show the application of photography to jurisprudence, both civil and criminal; to the study of insect, bird and animal life; to astronomical movements and conditions; to the study of electric discharges; to spectrum analysis; to the study of light rays; and to photo-micrography.

### THE LONDON PHOTOGRAPHIC SALON

THE Fourteenth Annual Exhibition of the Photographic Salon, conducted by members of the Linked Ring, opened September 14 and will continue until October 27. As the number of prints hung so artistically by Alvin Langdon Coburn, 184 in all, is 70 less than a year ago, one might be led to hope that there would be a

higher average of merit; but such does not seem to be the case. While the exhibition is very commendable and there is no lowering of the high standard set last year, the best-known workers have done nothing to better their reputation, with the exception of A. Horsley Hinton, while the real attractions in many cases are credited to lesser known names. Nothing this year was distinctly wonderful or startlingly bad, and although there were no pictorial eccentricities, some prints were so obviously supplemented by hand work that one begins to wonder where such work may legitimately begin or leave off and still be accepted as photographic. Undoubtedly the sensation of the Salon is "Le Penseur" by Alvin Langdon Coburn, mentioned individually elsewhere in this issue. Of variety there was an abundance in subject and treatment, ranging from the delicate and dainty prints of children and flowers by Mr. and Mrs. Cadby to the bolder style of Mr. Hollyer's portrait of A. Horsley Hinton.

Among the many English and European pictorialists who contributed distinctive work were A. Horsley Hinton, Alexander Keighley, J. Craig Annan, Mr. and Mrs. Cadby, Charles Job, Reginald Cragie, Robert Demachy, C. Puyo, R. Duhrkoop, Mrs. G. A. Barton, S. G. Kimber, J. M. Whitehead, F. Benedict Herzog, Eldorado Garrone, Ernst Mueller, F. J. Mortimer and others.

Evidently this was not an American year, for such workers as Stieglitz, Stiechen, White, Day, Abbott, Eickemeyer, and Henneberg refrained from sending exhibits, while Mrs. Käsebie, Alvin Langdon Coburn, Cavendish Morton, Frederick Haven Pratt, Jeanne Bennett and Adelaide Hanscom were each represented by notable work.

### COBURN AT THE LONDON SALON

FEW men in the field of art have risen to fame more rapidly than Alvin Langdon Coburn, the young American photographer whose genius for impressionistic camera studies has taken the Londoners by storm, dazzling them by his unusual gifts. Although the English glory in their Annans, Hintons, Jobs, Keighleys, Callands and Cadbys, all pictorialists of the highest order, they seem not to have developed a type of photographer of the peculiar artistic bent of Mr. Coburn. Mr. George Bernard Shaw was quick to grasp the subtle, fanciful art of Mr. Coburn, and the two personalities were soon attracted to each other. The playwright's admiration of his friend's individuality as a photographer found expression in an appreciation from his pen, which appeared in the catalogue of the exhibition of the Royal Photographic Society last February, and which it was the privilege of the PHOTO-ERA to reprint in full a month later. Among several remarkable portraits now on exhibition at the Photographic Salon, Mr. Coburn shows Mr.

## NOTES AND NEWS

Shaw in the attitude of "Le Penseur," a celebrated statue standing near the Pantheon, Paris. This photograph has created a profound sensation, provoking heated discussions among artists and laymen. It represents Mr. Shaw in the "altogether," but is excusable on the ground



ALVIN LANGDON COBURN

that it is done in the interest of art. The pose is well known. "The Thinker," a nude figure, is sitting, with one hand clasping the knees, the other supporting the head, heavy with profound meditation. Against a sombre background is the living statue in half-lights, and, though lacking the vividness of flesh-tones, the effect is that of a live man, posing as marble.

### THE BIRMINGHAM EXHIBITION

THE Birmingham Photographic Society, affiliated with the Royal Photographic Society, will hold its Twenty-Second Annual Exhibition at the Galleries of the Royal Society of Artists, New Street, Birmingham, Feb. 23 to March 2, 1907.

There are three open classes, as follows: (1) pictures, any subject or size; (2) lantern-slides; (3) scientific photographs.

Silver and bronze medals will be awarded in each class. The decision of the judges will be final, and they have power to withhold awards in any class if the merit of the work is insufficient.

There are no entry fees, and it is the desire of

the management to make this exhibition as international in character as possible, which means that America must be well to the fore, and we trust that PHOTO-ERA readers will do their share.

### REGULATIONS:

1. The Selection Committee reserves full power to accept or reject any picture. All the entries will, however, pass before the judges.

2. Every entry must be correctly described on the prepared Entry Form, which is to be returned to the Honorary Secretary not later than Feb. 1, 1907, addressed to Mr. Lewis Lloyd, Norwich Union Chambers, Congreve St., Birmingham, England.

3. Pictures must be received not later than Feb. 1, 1907, in order to allow time for selection, and framing of those accepted. They must be sent to the same address. Carriage both ways must be paid by the exhibitor.

4. Exhibits from abroad must be mounted, but need not be framed. Full particulars for identification must be written on the back of the mount.

5. Lantern-slides must be standard English size,  $3\frac{1}{4} \times 3\frac{1}{4}$ . They will be judged by limelight. In packing, the name of the exhibitor, and the number of slides the box contains must appear on the outside of the box. Title and the exhibitor's name must also be on each slide.

6. Exhibits must be the unaided work of the exhibitor (except mounting and framing). Any breach of this rule involves liability to rejection.

7. Ten per cent commission will be deducted by the society on all sales effected.

8. Every possible care is taken of work sent in, but the society cannot accept responsibility for loss or damage.

For further information address Mr. Lewis Lloyd, Honorary Secretary, Norwich Union Chambers, Congreve St., Birmingham, England.

### HARCOURT SEPIA PLATINUM

MESSES. Curtis and Cameron of Boston now offer for sale the same quality of sepia platinum paper, of their own coating, which has made their famous Copley Prints so justly prized by all lovers of the beautiful. This paper is known as "Harcourt Sepia." Evenness of product, beautiful richness of tone and simplicity of manipulation are its chief characteristics, and special mention should be made of the fact that the paper is intended for cold development in a plain oxalate bath, no sepia solution or mercury being used. Two grades are furnished: smooth and medium rough; and before this magazine reaches our readers these surfaces may also be had in black as well as sepia.

That "Harcourt Sepia" merits high praise is shown by its immediate success and the immense demand for it. Samples are sent without charge, and correspondence is invited with photographers and others interested.

## NOTES AND NEWS

### UNIQUE EXPERIENCE OF E. S. CURTIS

Mr. E. S. Curtis, whose photographs illustrating the life of the American Indian have won for him world-wide celebrity, and to aid whose work in this important field J. Pierpont Morgan contributed the sum of seventy-five thousand dollars, recently passed through an unique experience. He has been initiated into the Order of the Snake by the Hopi Indians in the State of Washington. It is stated that he is the first white man to take the vows of that mystic order. For nine days and nights he was confined in an ill-ventilated underground cell and subjected to severe tests of courage and endurance, accompanied by many ceremonies, during which the mysteries were explained to him. He states that one hundred and fifty snakes were used in the course of the initiation. The Indians handled them with perfect immunity.

As to the great task Mr. Curtis has set himself, viz., to preserve, by means of photography, a permanent record of the customs and characteristics of a dying race, it is pleasing to state that it is progressing rapidly and satisfactorily. Mr. Curtis has spent the past five months in the field, among the tribes of Arizona and New Mexico. After a brief visit to his home in Seattle in October, our energetic friend returns to Southern Arizona, where, for the next three months, he will continue his photographic record work. President Roosevelt is deeply interested in the labors of Mr. Curtis and has written an appropriate introduction to the publication on the American Indian — an *édition de luxe* — which Mr. Curtis is preparing, and the interest in which is steadily on the increase.

### THE KODAK EXHIBITIONS

PROBABLY nothing which the Eastman Company has done to advertise its enormous business can compare in importance of results with the exhibitions and lectures which are being given under its direction in the large cities of the country. At the present time the East is being favored with these entertainments, which by their scope and excellence are doing much to increase practical interest in photography among the people. After a brief and successful season at Worcester, Mass., the Kodak Exhibition opened in Boston, at Copley Hall, for two weeks. The three hundred framed pictures, varying in size from the postal card to a forty-inch bromide enlargement, though mostly of the latter class of print, were displayed upon the walls of the hall, and included views taken from every quarter of the globe, and wherever it is possible to use a Kodak.

Although the Eastman Company has unequalled facilities for procuring photographs from all parts of the civilized world, the collection of prints shown at the Kodak Exhibition *en tour* is remarkable for variety, beauty and

technical merit. As our readers are tolerably familiar with the possibilities of photography as here illustrated, it is unnecessary to enumerate the various subjects which the camera has successfully treated. It is sufficient to say that every field has been adequately covered. As a means of education, the Kodak Exhibition has been a brilliant success. The popular feature of this splendid enterprise, however, was the daily illustrated lecture on photography delivered in the exhibition hall by Dr. Joseph K. Dixon, an educated and refined gentleman, a man of deep learning and extensive travel, and an expert photographer. His discourses, always intensely interesting and instructive, held the attention of the audience to the end. The tenor of the press on the subject of every feature of the Eastman Company's touring entertainment was highly complimentary. This, together with the immense throngs of the most intelligent people which have been crowding into Copley Hall from morning till night, is proof abundant of the utmost success of the Kodak Exhibition. The educational side of this feature is particularly to be commended, and its value to the public can hardly be estimated, aside from the fact that an interested public is freely admitted to the exhibition and the lectures. The credit for this enterprise, as novel as it is expensive, is entirely due to the generosity and public spirit of George Eastman, the head of the Eastman Kodak Company, who, while identified as an eminently successful manufacturer, may well be regarded as a public benefactor.

ANNUAIRE GÉNÉRAL ET INTERNATIONAL DE LA PHOTOGRAPHIE, POUR L'ANNÉE DE 1906. Roger Aubrey, editor, and Plon-Nourrit & Co., Paris, publishers. Large octavo, cloth. Price six francs, net.

Although tardy in appearance, this French photographic annual, now in its fifteenth year, is a welcome addition to photographic literature. In its make-up it evidences an individuality distinctly French. While not a few of the illustrations impress one as charmingly *ingénue* — as feature a work published in Paris — the large majority are profoundly serious, and many of them are eminently artistic. Thus the volume is embellished with landscapes and genre studies by such well-known French pictorialists as René Le Bègue, Albert Regad ("Return from the Fields"), A. Malle, C. Puyo ("Milking-Time"), Robert Demachy, Mlle. C. Laguarde, J. H. Seeberger ("Morning Fog"), Mme. Binder-Mestro, A. Marguery ("Old Rouen"), Comte de Clugny ("In the Grotto"), De Launay, E. Adélot ("Birches"), A. Nourrit and Frédéric Boissonnas. The text is a veritable mine of information, articles on the scientific side of photography predominating. The contents is classified as follows: Part One — review of the year, optics and chemistry, and photographic proc-

## NOTES AND NEWS

esses, scientific, artistic and industrial; Part Two — miscellaneous; Part Three — photographic optics and chemistry; diverse information; photographic formulas; printing of positives, and miscellaneous recipes; Part Four — photographic societies in France, with a list of the full membership of each, followed by a complete list of societies and clubs, as well as photographic periodicals — annuals, monthlies and weeklies — throughout the world; Part Five — photographic commerce and industries. L. Mathet contributes an invaluable illustrated paper on photo-micrography, besides reviewing the achievements in photographic optics and chemistry of the past year. Color-photography is explained by Léon Vidal. G. Marsechal investigates all manner of up-to-date photographic apparatus, from the cumbersome studio outfit to the lightest snap-shot camera, not omitting the most improved apparatus for motion-pictures. An illustrated article on "Photography of the Electric Spark," by G. H. Niewenglowski, is of exceptional interest, and the results achieved in this branch of photography by this eminent investigator will, doubtless, prove of considerable scientific value. The experiences of Paul Pléneau in the Arctic regions also form the subject of an attractive article, the numerous accompanying photographs being of unusual merit. This will give an idea of the high character of the French annual as a source of photographic knowledge. To the regular practitioner, as well as to those in search of the scientific possibilities of the art, in its many various branches, we do not hesitate to commend this voluminous work of French experts.

### A NEW RULING-MACHINE

PROCESS work some years ago took possession of magazines and newspapers, and it was supposed that wood-engraving was a thing of the past. The wood-engravers were mostly absorbed by process-engraving establishments, and were employed in trimming and retouching photo-engraved plates. The public looked upon the art of the wood-engraver as something belonging to the past generation, and imagined that in a few years it would be counted among the lost arts.

Fortunately, there were a few conservatives, and all the wood-engravers did not go out of business, in spite of the small encouragement they received. Recently a change has been going on in public opinion. People are awaking to the fact that while process work has a large field all to itself, and while it is unapproachable in that field, it has certain limitations, and cannot take the place of the wood block. Wood-engraving also has a field of its own, and because of certain peculiar advantages which are unique, it has in its way no rivals. Artistically, it holds a place shared only by the mezzotint. Its effects are produced by putting white upon a black ground;

that is, as the engraver works he cuts away what would otherwise be black. This is the opposite of what is done in making a pen or wash drawing, where the artist is constantly adding black to his design. Of course the process block is merely a reproduction of his work. Pen drawings are particularly weak and light in effect because the work is done in the blackest of ink; there is an inherent difficulty in obtaining strength in this mode of drawing. Wood also has another advantage in the use of a white as well as a black line. Properly handled, the wood block presents almost unlimited possibilities to the artist. When to these artistic features we add certain commercial advantages of the greatest importance, we get a glimpse of the reason why wood still persists. The engraved line is sharp, clean, and has smooth sides, nearly vertical, which reproduce perfectly by electrotype, and without any difficulty. So perfect is the reproduction that no one ever dreams of using the wood block in the printing-press. The printing-surface is perfect, and has ample depth, which gives another point of advantage. The woodcut is at its best upon uncalendered paper, and with ordinary paper, ink and printing still produces clean, vigorous impressions. It gives the printer the least trouble. It is not a matter of wonder that renewed attention is now being given to the art. Wood-engravers are busy, and there is really a revival of business among them.

We have mentioned these facts to explain to our readers the appearance of a new engravers' ruling-machine, the Royle-Richards, a catalogue of which is just at hand. On the death of Mr. Richards, the firm of John Royle & Sons came into possession of all his papers, drawings and patterns of the ruling-machine. They have re-designed it, added new features, and by means of modern machinery have vastly improved the workmanship, making a new instrument of it. The catalogue is a large and handsome piece of book-making from the University Press. There are two half-tones; the remainder of the cuts, nearly forty in number, are from electrotypes of woodcuts. The subjects are all mechanical, except those devoted to illustrating the tints and line work which the machine can produce. Some sixty different tints, lines and combinations are shown, and these appear to be only a fraction of the possible varieties. The work produced is so varied that "Engraving-machine" suggests itself as its proper name. Some of the engravings of complicated machines were made with only a trivial amount of hand work. The machine is really indispensable to the wood-engravers.

From the examples that have been given, it appears that it would be extremely useful to the process workers for backgrounds, skies, flat tints and many other effects. Certainly when hand tooling is used to any extent, the machine, in the hands of a man who cared to make the most of it, would become invaluable. It can work upon

wood, copper, zinc, brass, and for the wax process can do any of their ruling work. The steel-engraver will find it useful in working through etching-grounds. The accuracy of the machine is great. Parallel lines may be ruled as fine as 4,320 per inch. On full-size machines the circle can be divided into 129,600 parts. Smaller machines divide the circle into 64,800 parts. This is a number sufficiently great for all practical purposes. The real advantage of these very fine graduations is not in the fact that one ever wishes to make use of such fine rulings, but because by the use of them almost any subdivision of the inch may be obtained with an even number of teeth.

The catalogue is well worth the attention of any one connected with the engraving business. It is intended for free distribution, and can be obtained upon application.

## A MEDAL FOR VOIGTLAENDER

At a recent convention of the German Photographers Association, held at Breslau in August, 1906, an exhibition of photographic lenses and cameras made by the Voigtlander & Son Optical Company was awarded the first prize, a gold medal.

It is needless for us to state that the goods manufactured by this house are so well known, not only in Europe, but in the United States, that it is no surprise to us to learn that the award was made in their favor. The American branch of this firm is located at 137 West 23d St., New York City. Any information on the subject of photographic lenses will be cheerfully given upon request.

## THE NEW GOERZ CORPORATION

On September 8th the United States branch offices and factory of the Optische Anstalt C. P. Goerz, A. G. in Berlin, were incorporated under the laws of the State of New York. The business will continue under the style of C. P. Goerz American Optical Company, 52 East Union Square, New York, with a branch office in the Heyworth Building, Chicago, in charge of Frank Benson. Messrs. Telgman and Torka remain general agents for the Pacific coast.

This step has been rendered necessary by the steady and remarkable development of business. It was felt that a time had come when nothing but complete autonomy would allow the firm to adequately forward its interests and those of its customers.

The manufacturing plant will be greatly increased, and the scope of manufacture extended. The greatest attention will be given to the promptest possible delivery of all orders. It is unnecessary to say that the same standard of excellence which has always characterized all Goerz products, and has given them their world-wide reputation, will be jealously maintained. It will be the endeavor of the new corporation to remain

strictly up to date in every respect, and no effort will be spared to give customers the very best quality of goods that money and painstaking effort can procure.

The new American company is capitalized at \$110,000, and the management remains as before; viz., C. P. Goerz, president; J. Rinnebach, first vice-president; L. J. R. Holst, who has been at the head of the American branch for a number of years, second vice-president and general manager; Otto Goerz, a brother of C. P. Goerz, secretary; and Gerhard Schmidt, treasurer. Mr. A. K. Boursault, to whom credit is due for the attractive advertising and handsome catalogues of the Goerz products, will continue as advertising manager. Fred Schmidt is superintendent of the American factory, while Oscar Chouinard and Will Lussier are the traveling representatives.

Herr Commerzienrath C. P. Goerz, the president of the American company, is a fine type of the successful, democratic German business man. Lens-making has assumed vast proportions in Germany, and the Goerz factory is probably the largest in that country, being capitalized at five million marks (nearly a million dollars) and employing nearly two thousand men. There are branch establishments in various countries, and new factories have been opened recently at Vienna and St. Petersburg. Counting those in all the branches, over 2,500 persons are employed by Herr Goerz, who is in reality the proprietor of the German company as well as the auxiliary companies. As anastigmat lenses, binoculars, shutters, Anschütz cameras, gun-sights and similar optical instruments are manufactured, all of which are extremely popular, it is not surprising that the stock is paying 15 per cent dividends annually.

A word should be said regarding the Goerz workmen, as they are unusually well provided for. Each, every year, receives a week's vacation at full pay, and the Workmen's Pension Fund has been given stock in the concern to the value of 200,000 marks.

## THE HYATT CATALOGUE

We feel justified in saying that Hyatt's No. 17 General Catalogue is not excelled for completeness, high standard of goods, introduction of modern photographic requisites and typographical composition.

This catalogue has been carefully edited, and arranged with great regard to the proper classification of the goods, simplifying it for the convenience of the purchaser. It is divided into many sections, each section being designated by main headings, followed by sub-headings.

The cover, printed in double-tone Antique Bronze, representing an antique bronze shield, has been commented upon as a most striking, effective and forceful piece of work, at once impressing the reader and strengthening the con-

fidence already established by the careful, painstaking service of this house since 1868. The illustrations with the Diamo lens, a lens specially suitable for dark days and dark subjects, also the illustrations with Hyatt's Special Portrait Lens, a lens for fine portraits, as well as the various illustrations for embellishment throughout the catalogue, is a departure from the beaten path. The complete Portrait and View Outfit Section is an eye-opener; never has such a desirable line of complete outfits been offered to the public; every detail is carefully looked after. The Background and Accessory Section is a revelation printed in double-tone Olive Ink, yielding the half-tone effects so necessary in background reproductions. The Card Stock — 32-Page Section — offers the latest in staple and novelty mounts, printed in double-tone Egyptian Brown Ink, on heavy India Tint Stock, which is almost equal to submitting the actual sample mounts.

This catalogue contains 240 pages, 7½ x 10½. It is a valuable book, and cannot be sent out broadcast, but the publishers are anxious that every photographer who is interested in this work, and who is a possible customer, should have one of these catalogues in his possession; therefore it will be sent on request, upon receipt of five two-cent stamps to cover the cost of forwarding, etc. Address H. A. Hyatt Supply Co., 316 N. 8th Street, St. Louis, Mo.

## JAPINE PLATINOTYPE

JAPINE Sepia Platinotype, mentioned in the September PHOTO-ERA, was introduced to the world at the 1906 Convention at Southampton, England, and created a profound sensation, as it did later at the National and New England Conventions in this country. The paper in question provides what many photographers have been intensely longing for; i.e., a sepia platinum print which, instead of having a dull surface, possesses the half glossy "egg-shell" surface met with in some carbon prints.

Platinotype workers have often wished that the same effect which was apparent as the wet print lay in the washing-water could be retained by the dry print. This, in a large measure, is what the "Japine" paper effects, the shadows being not dull, but rich and lustrous. Moreover, the range of gradation has been considerably augmented, which may easily be proved by a careful comparison of prints taken on the old and the new papers.

When it is added that the printing latitude of "Japine" is twice as great as that of ordinary Platinotype, and that its damp-resisting power is tenfold as great, it will be realized that there is likely to be a considerable popularity for this notable improvement of variation in platinotype printing.

"Japine" Sepia will be furnished in two surfaces, matt and glazed.

## ARISTO CARBON SEPIA PAPER

SINCE the introduction of the Aristo Gold postcards, a description of which was given considerable space in our columns last December, the high-grade material used in their make-up, the very simple manipulation and the beautiful results obtained, led a number of photographers, both amateur and professional, to request the American Aristotype Company to place on the market the same material in cut sizes, for portraits and other views. To meet this urgent demand the American Aristotype Company has decided to place this paper on the market under the name of Aristo Carbon Sepia. A price-list will be mailed on application to the American Aristotype Company, Jamestown, N. Y.

Through the courtesy of the American Aristotype Company we have had an opportunity to give this new paper a thorough trial, and we do not hesitate to say that the extreme simplicity of the process, and the beauty of the results obtained at so small an expense, place Aristo Carbon Sepia in a class by itself, excelled by none. Procure a package of your dealer and be convinced.

The guarantee of the Scientific Lens Company, and their low prices for the United States Optical Company lenses advertised in this issue, will sell the lenses quickly. Send your order at once, or have a lens reserved for you, which will be done if you mention PHOTO-ERA. It is a rare chance to get a really good lens, for less than cost of manufacture.

"The American Annual of Photography" for 1907 has been announced by George Murphy, Inc., the exclusive sales-agents, and is promised to be better than ever. The book will contain over 300 illustrations in all, 24 of the full-page illustrations being in color, and the long list of interesting articles will be a distinct addition to any photographic library. The price is the same as usual: paper cover, 75 cents; cloth-bound, \$1.25.

Plans are already being made for the Fifth Annual Boston Automobile and Power Boat Show, to be held at the Mechanics Building, March 9 to 16, 1907. This show promises to be the largest ever held in Boston, and application for space should be made at an early date to Chester I. Campbell, General Manager, 5 Park Square, Boston.

The "Year-Book of Photography" for 1906 may now be had of G. Gennert, New York and Chicago. The price is 50 cents; postage 12 cents extra. In addition to many fine illustrations, the book contains a wealth of photographic information by well-known and able writers, including an article on "Bromide Printing and Gaslight Paper," by F. J. Mortimer, F. R. P. S.

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THEODORE EITEL  
THE BEECHES IN AUTUMN





# PHOTO - ERA

The American Journal of Photography

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LONG'S PEAK FROM MOUNT TYNDALL

## A SUMMER IN THE ROCKIES

LOUIS J. CHRISTIE

*Illustrations by the Author*

**Y**OU may look through the magazines and the daily papers all winter long to find a place to spend your summer vacation and yet not be at all satisfied. Mr. Smith, your next-door neighbor, goes to Europe and you know he will come back with a long list of things he wants to tell you. Johnson, the clerk at the office, goes to a fashionable summer resort and squanders all his hard-earned savings trying to be "it" for just a little while, and he is bubbling over with excitement as he recites the same old story of the "peaches" he met. Then there is Willie, the office-boy, who is out on some creek camping, and he too will have his story.

Still, you stay at home just because those other things don't interest you.

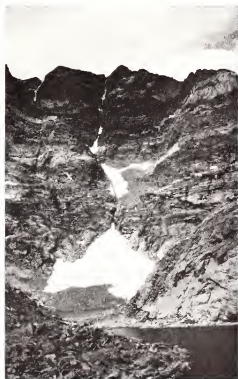
Now take a map of the United States and look about two thirds the way across and you will find a few dotted lines and the words "Continental Divide," or "Front Range." That's the place for your summer vacation! You are tired of people, cars and dirty streets, and the mountains, with their pure air, so dry and bracing, will appeal to you as nothing else can.

I remember the day I had my first stage ride over the pass leading to Estes Park from Lyons, a few miles north of Denver. Any one having any knowledge of mountain roads would laugh at the idea of calling it a pass, but it seemed like one to the few of us who were riding over it for the first time. The driver was so careless, as he turned the leaders around the corners on the narrow ledges when only a few feet would mean sudden death to us all! But afterwards, when I came back over that same road, my principal idea was to get to sleep. It was so tame compared with the real passes and narrow ledges that the summer's outing had taken me over!

I stayed around the rustic ranch-house at the foot of Long's Peak over two weeks before it was possible to do any more than climb the green-covered hills that spur out from the higher ranges. The rarity of the air, nine thousand feet above the level of the sea, was so pronounced that it hindered any long walks, and running was an impossibility. The first trip, when I had become acclimated, was the climbing of Long's — one of the most beautiful and imposing of all the peaks in the Rockies, and, according to Mr. Conway, the famous mountain climber, one of the most difficult in the world to climb. Irregular on all sides, it stands out above everything else, a landmark for miles around.

A party of us started at four in the morning on horseback, and up the side of the mountain, as the trail wound in and out, the little brooks bubbling over it in places, the sun rose gradually and cast its weak yellow light on the top-most part of the peak before us. Finally it came into view over the top of the Twin Sister Mountain several miles away, glowing red and casting weird shadows on the last few trees at Timberline — trees that have stood up bravely, sheltering those behind them for hundreds of years, bearing the brunt of all the snow and hail the Storm King could hurl at them during his reign of nine months in the year. Bared of bark, twisted and bent, with only a little foliage on the very tips of the branches, stunted in growth but still living, they stand there, unconquered to the last! It is at this place that Enos Mills, the man who knows and loves this old mountain, judges the characters of the people he guides up its steep and rugged sides. It is easy, he says, to tell whether a man will reach the top or not merely by his actions and exclamations as he goes by Timberline.

And the trail winds on, past huge banks of snow, until Boulderfield is reached, with a totally different view of the peak. We left our horses here and tied them to small rocks so they would not graze, and then started on foot across this vast field of boulders, a mile square, the most monotonous stretch on the trail. The longer you walk the longer it seems, and the last stretch before reaching Keyhole is enough to make any one want to turn back; but there is something in store for those who do keep on. Standing in the small opening which so resembles the keyhole in a door, there lay below us a vast gorge bounded on all sides but one by precipices, so steep that a shivery feeling creeps around, and you wonder what you would look like if you happened to fall over. You could look for hours into this vast amphitheatre and yet not see half that it contains. Here, again, is a new aspect to the lofty peak above, and it is just as far



THE PALISADES ON LONG'S PEAK  
YPSILON LAKE, MUMMY RANGE

MOUNT YPSILON

away as when we started; but move we must, for those who linger never reach the top.

From Keyhole on the climb is over dangerous rocks, narrow ledges with huge walls above and ragged sloping sides below, where just one little misstep is a free pass to eternity. Along the trail, the first long stretch is called the Slide — a scaly wall of rock pitched at an angle of sixty degrees; not a difficult place to get over, but it leads to the Trough, which is long and tiresome, besides being hard. Then the Narrows, with their precipices, scary places and hard climbs; and last but not least, the Homestretch — a series of fissures where there is no trail, and, picking our way back and forth as best we could, resting every few steps, we finally reached the summit, a flat field of rocks, about three hundred feet wide and six hundred long, desolate, with only the occasional cry of the little cony — half mouse and half squirrel — who lives there, 14,276 feet above the sea-level.

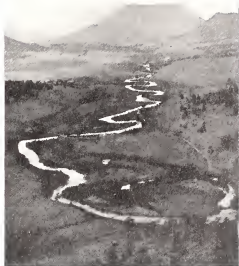
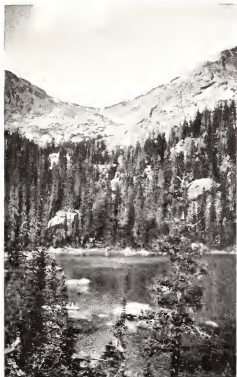
From there, looking in all directions, nothing was visible but mountains; Pike's Peak lay 108 miles to the south, and beyond it the San Juan and Sangre de Cristo ranges stood out as clearly as if we had photographs of them before us. On the north, the Uintah, Laramie, Medicine Bow and Mummy ranges were surrounded in frames of bright clouds; to the southwest the College Peaks and the Mount of the Holy Cross — in fact, nearly all of the high peaks of Colorado could be clearly seen.

The gigantic glaciers on the Arapahocs and the Mummy ranges looked like small patches of snow, but with the aid of a strong glass, the air was so clear that we could see the great yawning crevasses, and it was so near and natural we even listened to hear some bubbling stream running down among the rocks.

After a half-hour of wonderment we started the descent, refreshed and apparently as strong as ever, for it does n't take long for one to recuperate in the mountains. We passed the Palisades with their huge flakes of granite sticking straight up into the air, and old Muker, with its fourteen thousand feet of grandeur and its top covered with snow and clouds, forming a view so awesome and frightful that all of us exclaimed at once that it was too wonderful to be true. Of the small percentage of those who get beyond Keyhole, only a few can stand the gruelling climb up the Homestretch; and so near the top, yet so far away, they sit here at the foot of it and look at Muker until the stronger ones come back.

Three hours later we passed Timberline, and at five in the afternoon we reached the ranch, just as the sun was setting — tired, but happy, that we, insignificant mortals, were able to master so great a creation.

Then there are other trips than that of climbing Long's that may be taken from Mills' Ranch — one especially that a party of us made, in one day, up the St. Vrain River to its source at the foot of Mt. Tyndall. In climbing a mountain one encounters the beauties of nature as to the views and magnificence of the rocks that lie there, but in this trip up along the St. Vrain we encountered some of the wonders of nature I never before had the pleasure of meeting.



YPSILON LAKE, MUMMY RANGE

ESTES PEAK FROM MT. OLYMPUS

TIMBERLINE ON LONG'S PEAK

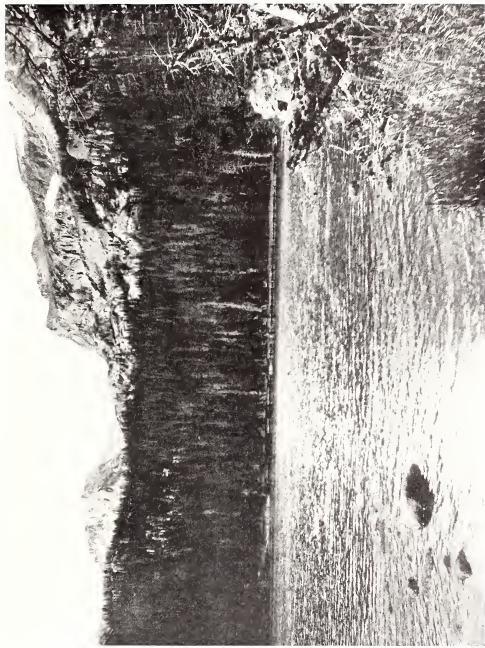
We left the ranch one morning at five, on horse, and dashed along the road at a good rate to get the blood into circulation. An hour or so later we passed Copeland Lake, one of nature's mirrors lying about ten miles north of Allen's Park, and it was there that we got our first view of Mt. Tyndall in the distance. It seemed a long way off, and some of us even doubted if we should be able to reach it before noon; but the air was cool and the horses were fresh, so we cantered on. Later we broke from the road and followed a faint trail into a seemingly impenetrable forest, where the trees never had known the ravishes of fire and grew there as God wished them to grow, revealing the beauty of nature to the fullest extent. Some of them had moss hanging from the tips of the branches — light green moss that made you think there was some truth in the theory that it had been at one time covered with water. Others, as large as three feet in diameter, stood up proudly, and would no doubt have bowed to us if we had not been so small.

Winding back and forth through the undergrowth, sometimes catching a glimpse of the roaring river as it rushed over the rocks, so kindly placed there that it might make itself known, we gradually rose higher and higher until we emerged from the forest and came out suddenly at the foot of the mountain which was our goal. Just in front of us lay a beautiful, quiet little lake surrounded by trees and rimmed with large boulders and tall green grass, with snow-speckled mountains standing straight up in the background as if to defy us to go farther.

After tying the horses we started around the lake and up the side of Tyndall, but on account of lack of time we were unable to get beyond Timberline, and there we stayed to eat our lunches. Again we got a different view of Long's as it stood out above the high moraine running from the side of Muker on the range. From this side the difficulties of ascent could be seen more plainly, and the lack of snow showed how steep and smooth the rocks were.

But it was fast growing late, and we, tired and weary, commenced our trip back, first going around the lake on the other side to see if there was anything we had missed. At seven we were at the ranch. After supper, finding that the lake had never possessed a name, I suggested that it be named Ouzel Lake in honor of the valiant little water ouzels that are so numerous there. And therefore I speak of it as such, for so beautiful a creation should at least have a name.

A week or so later a terrible accident occurred, in which a young student lost his life while attempting to descend one of the rugged peaks on the Mummy Range, Mt. Ypsilon; and soon after that, Mills, another mountaineer, and I started out with the purpose of finding a trail up the face of the mountain so that some men could carry materials up to build a tomb of granite over the boy's body. Our start was very early, and it was only sunup when we reached Horseshoe Falls, preparatory to our climb over the long moraine which emerges from the side of the range. After several hours of ascending we came in view of the mountain towering above us, and, after tying the horses, we started out



MOUNT TYNDALL AND OUZEL LAKE

to make the ascent. Of a sudden, in the midst of a wild and unknown region, we came upon one of the most beautiful of mountain lakes I have ever seen. Its surface, dotted here and there with large boulders, and the little birds flying back and forth, seemed to perfect the scene. It was a shame that we could not stay; but hard and tedious work was before us, so, loaded with cameras and raisins (our lunch), we started on again.

By picking a trail, sometimes having to go back and try again, other times getting drenched by having to go under falls to get higher, we advanced and came out on a flat space directly at the foot of the immense wall of granite which is called Mt. Ypsilon. The mountain gets its name from the two large fissures which start very near the top and join farther down, making a Greek *Y*. These gulches are filled with snow throughout the year, thus enabling one to see the great letter for miles.

From here on the climb was comparatively easy, and our mission was soon accomplished. On returning we had several minutes to spend around the small lake — Ypsilon Lake, by the way—and we found numerous places where the rocks hung over enough to shelter several campers, and, if possible, we were coming back; but I regret to say it was not accomplished. The return was over the same ground, and quite as slow as the ascent, on account of the fallen timber; consequently we did not arrive at the ranch until very late.





# IMPROVEMENTS IN THE DIFFRACTION PROCESS OF COLOR PHOTOGRAPHY

HERBERT E. IVES

THE diffraction process of color photography, invented by Prof. R. W. Wood, of Johns Hopkins University, in 1899, is an application of the well-known three-color method of reproducing colors by photography. This method depends primarily upon the observations of Young, Helmholtz and Clark Maxwell, that all the colors of the solar spectrum may be counterfeited to the eye by mixtures of three narrow bands of color from the spectrum; these colors are *red*, near the Fraunhofer line C; *green*, near E; and *blue*, near F. For instance, red and green mix to give the eye a sensation of yellow indistinguishable from the true yellow of the spectrum; red and blue mix to give purple, and the three colors acting together produce a white whose difference from ordinary white light can be detected only by analysis with a spectroscope. What applies to spectrum colors applies equally well to the varied hues of nature. The coloring of such an object as a basket of fruit can also be duplicated to the eye by mixtures of the three primary colors: the tint of an apple, by a large proportion of red, less of green and blue; of a lemon, by nearly equal parts of red and green; of grapes, by a large proportion of blue.

The three-color process can be reduced to two problems: first, the production of three photographic negatives, each of which shall be an exact record of the amount of one of the primary colors requisite to mix with the others and counterfeit to the eye the color of the object photographed; second, some means of furnishing each record with its appropriate color and combining it with the others.

The solution of the first problem has been arrived at from experimental quantitative determinations of the mixing proportions of the primaries to produce the other colors. From these determinations three-color screens can be prepared, which, when used with suitable photographic plates, will yield three (black and white) negatives, each having the desired destitution of light and shade to form a record of one primary color. The negatives thus obtained are the basis of all three-color reproduction methods.

Numerous means have been suggested and tried for combining the three-color records with their corresponding colors. They may be placed in a triple lantern, each illuminated with its proper colored light and projected, superposed, upon a screen. The superposition may be effected by a system of mirrors, as in the Kromskop; by the use of three thin transparent films properly colored; by triple printing on paper, after the manner of much of the present-day magazine illustration.

A process which must be noted somewhat in detail because of its direct bearing on the recent development in diffraction color photography is the so-called Joly process, first published, as a matter of fact, by Louis Ducos du

Hauron in 1869. Combination of the colors is effected in this by breaking up the three-color records into narrow lines, arranged in succession, a line of the red record, a line of the green, a line of the blue, and so on, repeating across the picture. This triple record, whose lines should be close enough together to be indistinguishable by the eye, is mounted over a triple ruled color-screen — a line of red pigment, a line of green, a line of blue, similarly spaced to the lines of the picture. The result, if the lines are fine enough — a condition never yet attained in the actual working of the process — is that the eye blends the lines to form a structureless color picture in the form of a transparency.

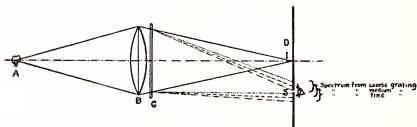


Fig. 1

The diffraction process, which is the subject of this paper, departs widely from the other methods. Its distinguishing feature is that for the production of the primary colors to view the records use is made of the diffraction grating; that is, of a transparent polished surface, usually of glass, ruled with fine parallel straight lines, several thousand to the inch. It is the property of a diffraction grating that if a bright line or point of light is viewed through it, not only will the light source be seen, but spread out to either side will be a series of spectra, those nearest the source being called spectra of the first order; the next, of the second order, etc. If the number of lines to the inch on the grating be increased, the spectra are thrown farther from the central image, and vice versa.

The power of a grating to produce color is taken advantage of in the following way: Suppose we have a convex lens forming on a screen an image of a bright source of light, such as a gas flame. If the eye is placed where the image is formed, the lens is seen uniformly and brilliantly illuminated. Suppose now a diffraction grating is placed over the lens. In addition to the image formed as before, there will be produced a series of spectra. If the eye is placed in one of these the lens will, as before, appear illuminated — not, however, by light of the color of the source, but by the color of light striking the eye.

If now we can make one of our color records in the form of a diffraction grating of varying strength to correspond to the desired differences in the amount of the primary color, and place it over a lens, points can be found in the lateral spectra in which the lens (and the grating in coincidence with it) will appear as a colored picture. Further, since, as we have seen above, the distance of the spectra from the central image depends upon the fineness of the grating spacing,



PORTRAIT BY J. C. STRAUSS, ST. LOUIS, MO.  
P. A. OF A. SALON



it is a simple matter to choose three gratings, one of which will send red to a chosen point, the second green, the third blue. Hence, if we can make the three primary color records in the form of three diffraction gratings of three properly chosen spacings, each may be seen in its proper color by placing the eye in one of the diffraction spectra formed as above described.

In Fig. 1 we have represented the conditions for viewing diffraction color pictures. A is a source of light, B a convex lens, in front of which are three gratings G. On the screen D fall the central image I and three spectra (only the first order spectra on one side are represented) so placed that the red of one, the blue of another, and the green of the third are superposed on the slit S, at which the eye is placed.



Fig. 2

In Fig. 2 we have represented diagrammatically a diffraction color picture of a red flower with green leaves on a blue ground. The coarse spacing of the lines in the flower represents a grating to send red light to the eye, say 2,400 lines to the inch; the medium spacing of the leaf, one to send green to the eye, say 3,000 lines to the inch; the fine spacing of the background, one to send blue, say 3,600 lines to the inch. Mixed colors would be given by two or three gratings acting together.

To produce such gratings by photographic means the bichromated gelatine process, which lends itself well to the copying of minute structures, was used. In contact with a surface sensitized in this way was placed a glass grating; the image of the corresponding color record was then projected upon the surface for a sufficient time to give a full exposure. The grating was removed, another substituted and exposed under its corresponding color record, and so with the third. In this way all three grating pictures were printed, one on top of another, forming a picture which by diffused light was transparent and quite invisible, showing its color only when viewed with the proper combination of lens and bright source of light. In practice it was found impossible to get three impressions on one gelatine surface and so two were made on one surface and the third on another, the two surfaces being afterwards placed in contact. From the pictures made in this way copies could be made by simple contact printing on bichromated gelatine. Since a direct copy of a grating is still a grating, *i.e.*, a series of lines, the process is a positive one and copies are not reversed in light and shade as in making copies of ordinary photographs.



MRS. CALEB KEENE

CAPE MALAY LAUNDRY

It is obvious that quite apart from its scientific interest the diffraction process promises very real advantages. For instance, the colors used are beyond question pure spectrum colors, and so there is no need to depend on dyes or colored glasses; also the ease and cheapness with which copies can be made places it in a class by itself among three-color processes. So perfect, indeed, did the process seem theoretically when first published that there was every reason to expect results fully comparable with the best of other methods.

This early promise was not fulfilled. A few pictures were obtained, interesting as scientific curiosities only. No dependence could be placed in the results: some colors reproduced well; others did not; occasionally a good picture would be made, but the same procedure applied to another subject brought no success. Six years after its publication the process had made no progress and seemed fated to rank as a failure.

Last summer, through the courtesy of Professor Wood, the writer was loaned a number of diffraction gratings, ruled on the Rowland dividing-engines at Johns Hopkins University. Experiments with these revealed a fundamental defect on the above-described mode of making diffraction pictures. By finding means to overcome this defect, results have been obtained of a remarkable degree of perfection.

The defect referred to is that the three gratings, in order to get their joint

effect, were *superposed*, being, as we have seen, printed one on the other. In so doing the assumption was made that the effect of superposing gratings was to add their separate effects. As a matter of fact, additional, disturbing effects are introduced, partly due to the inability of the gelatine surface to take several grating impressions without mutual blotting-out, and partly — chiefly, in fact — to the forming of a new compound grating. That is, if two gratings of different spacings are superposed, the two spacing periodically get in and out of step with each other, and this new periodic structure forms itself a diffraction grating. The new grating then forms its own series of spectra, which subtract light from the original ones. Therefore, when the two gratings are superposed, the eye, instead of receiving a double quantity of light, receives much less than the double quantity. Even more serious than this loss of light is the fact that the new spectra due to the two gratings together frequently fall in such a position as to introduce *false colors*. This is well illustrated by taking two gratings of different spacing and placing them on one another at right angles. Two sets of spectra will be formed, one by each grating, and parallel to it, and, in addition, a number of diagonally disposed spectra. As the gratings are turned into the same straight line all the spectra turn, and the additional diagonally placed spectra take up positions between the spectra formed by the original gratings. Consequently, while the eye may receive red from one grating and blue from another, one of the spectra due to the two together may send some other color, such as green. This case actually occurred frequently, a pink rose reproducing as green, and red and blue color discs superposing to give green instead of purple.

These observations made clear the necessity for some method of obtaining the effects of the three gratings other than by superposition. It was at once seen that this could be accomplished by a procedure similar to the Joly process; namely, by having the grating elements in narrow juxtaposed strips. Some experiments had already been made by Professor Wood with Joly pictures, not, however, with the specific purpose above mentioned, but rather to illustrate the possibility of making such pictures with very much finer color lines than it is possible to do by ruling alternating colored pigment lines for the observing-screen. The mode of procedure involved laboriously ruling a special grating consisting of several lines of one spacing, followed by several of another, and then several of the third, repeating all the way across the plate. The width of each strip of lines was made to correspond to the width of an element of the Joly picture. From this grating a print was made on the special-line picture, which had been previously flowed with gelatine. This in turn was used to print gelatine copies.

A practical disadvantage of this plan, aside from the use of the special grating, is that one is restricted to the use of original Joly pictures of a certain definite spacing of line, determined by the limitations of the process employed in their production. A much more serious defect arises, however, in this way: the "Joly lines," if made, as they should be made, several hundred to the inch,

themselves form a diffraction grating, which, as it is parallel to the three principal gratings, forms spectra superposed on those depended on to reproduce the colors of the object. This is quite as serious a defect as that arising from superposed gratings, and is sufficient to condemn the procedure.

From a consideration of these various difficulties it followed that some means of breaking the picture up into lines was imperative, and that that means should not involve the use of a special grating, nor of special Joly original pictures, difficult to obtain, and, most important of all, the narrow color strips or Joly lines must be arranged in some way so as not to give disturbing grating effects.

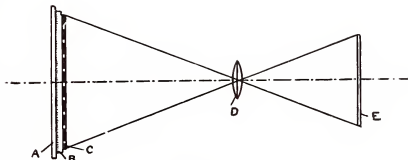


Fig. 3

All of these ends were achieved by the following procedure:

In Fig. 3, which represents the method of making the improved diffraction pictures, A is the bichromated gelatine plate, rigidly fixed in position; B is a glass diffraction grating; C is a line screen, ruled with at least two hundred lines to the inch, with the opaque lines twice the width of the transparent; D, a lens; and E, a positive color-record to be copied. The latter is an ordinary three-color positive containing no lines or structure, and the grating is an ordinary continuously ruled one. With, say, the red record at E, and the corresponding grating at B, an exposure is made, resulting in a series of narrow strips. A second positive is then placed at E, the corresponding grating at B, and the ruling C moved the width of a transparent portion. A second exposure is then made, the opaque lines shielding the previously exposed surface, and a similar treatment given to the third positive. There results finally a picture made up of alternating strips of three different gratings.

To eliminate the grating effects of the narrow strips of gratings considered as lines, the device is used of making the strips (Joly lines) run at right angles to the diffraction grating lines, so that the spectra produced by them are thrown off in another direction and do not enter the eye. Although the device is simple, it is of extreme importance, and its adoption is rendered possible only by the plan described for making the pictures. The difficulties in the way of ruling a special grating with the three gratings disposed in a similar manner are practically insuperable. It is obvious that the strips of grating can be made as nar-

row as desired — easily narrow enough to be indistinguishable as such by the eye.

Fig. 4 gives an idea of the appearance of the finished picture under the microscope. The short, fine lines are the diffraction grating lines furnishing the three primary colors: 2,400 to the inch for the red, 3,000 for the green, and 3,600 for the blue. The broad strips at right angles to the grating lines constitute the "Joly lines," of which there should be at least two hundred groups of three to the inch.

When viewed with a lens and bright source of light, the pictures made in this way are entirely free from the formerly obtained defects. The colors are pure and brilliant, and, unlike ordinary Joly pictures, the color lines are too fine to be visible. The results, indeed, approach those obtained with the Kromskop.

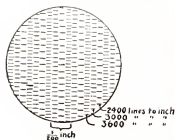


Fig. 4

As a further modification of the original method the writer has found it possible to dispense with three gratings and obtain the colors with a single grating spacing properly used. To do this the source of light must be a rather long slit. Viewed through a grating the slit of course gives long spectra parallel to its length. If now the grating be rotated about, the perpendicular dropped from it to the slit, the spectra move in toward the slit. [The accompanying shift parallel to the length of the slit is compensated for by the slit being long.] So by suitable rotation any desired spectrum color may be obtained at a chosen point. Starting with a grating of 3,600 lines to the inch to give the blue when parallel to the slit, a rotation of about  $21\frac{1}{2}$  degrees will give the green; of 42 degrees, the red. In the absence of suitable dividing-engines to rule three properly proportioned gratings this affords an exact and easy method of securing the three colors. It has the fourth advantage that in printing copies such difficulties as securing perfect printing contact will affect all three colors alike, which is not the case with gratings of different degrees of fineness.

Figure 5 shows a portion of a picture made in this way with one grating spacing. After working out this idea the writer learned that some years ago Mr. Thorp, of Manchester, suggested the use of a single grating spacing to secure





PORTRAIT BY F. W. HORNEBAKER, SCRANTON, PA.  
P. A. OF A. SALON



all three colors. Mr. Thorp's plan, however, was to use three sources of light and merely rotate the gratings until they "found" the source and each cleared the source belonging to the other two. He found a rotation of ten degrees convenient. As far as the writer knows, this is the first publication of a plan to secure any desired color by rotation through a definite angle to be calculated from the wave-length.

With these improvements, probably the last word has been said on the diffraction pictures themselves. A very important improvement in the means for observing them, due to the writer's father, Mr. Frederic E. Ives, must be described.

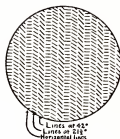


Fig. 5

The lens and bright light used by Professor Wood do not form at all a convenient arrangement, nor is it desirable to use artificial light. A convenient apparatus, easily set up, not liable to get out of order, and suitable for daylight use, becomes desirable as soon as the pictures are perfected. The instrument about to be described was devised a few hours after the first pictures were obtained, and admirably fulfils its purpose. The greatest difficulty attending the use of daylight is that of getting sufficient light — the illumination of the sky, toward which an instrument would naturally be pointed, is far from intense enough. This will be appreciated when it is remembered that only a very small portion of the original light is diffracted, perhaps ten per cent at most. This difficulty has been overcome in a novel manner. Instead of depending on a single slit, as the narrow source of light, a series of slits is used, each furnishing one spectrum. In this way, with four slits, two first order and two second order spectra are utilized, yielding probably three times the light obtainable from a single slit.

Figure 6 gives the instrument in section. A, B, C, D are the four slits; M, a mirror; L<sub>1</sub> and L<sub>2</sub>, lenses; P, the diffraction picture; and S, the slit through which the picture is observed. The lenses of course form an image of each slit at A', B', C', D'; from each of these images, however, a certain amount of light is diffracted by the picture P; from B and C first order spectra fall on S; from A and D, second order. The use of second as well as first order spectra is a distinct advantage in that, as gratings never give a perfectly uniform distribution of light and color, certain desirable qualities of the picture are found in one

order and not in the other, while if both orders are used the resultant evening up of qualities produces particularly satisfactory results.

By disposing the grating lines in a horizontal direction and using horizontal slits as sources the pictures may be viewed by both eyes, a desirable condition for convenience and comfort.

As an instrument the "Diffraction Chromoscope" is simplicity itself. It is, in fact, used much as the old stereoscope. There are no adjustments; to use, it is merely placed before a window or Welsbach light and the pictures dropped to place. On looking into the eye slit before the introduction of the picture nothing is seen, the inside being perfectly black. The pictures themselves are transparent, colorless, and appear as plain pieces of glass under ordinary conditions of illumination. On placing them in the instrument the colors immediately flash out, a transformation which seems almost magical, affording a scientific demonstration of rare beauty.

Aside from the obvious use of the apparatus for scientific purposes, it is expected that its simplicity and the perfection of the results will ultimately lead to many important uses. Now that the long-standing obstacles in the way of success have been removed, the process should develop rapidly. Such further steps as application to lantern projection and means for making the pictures directly in the camera are under consideration.—*Journal of the Franklin Institute.*

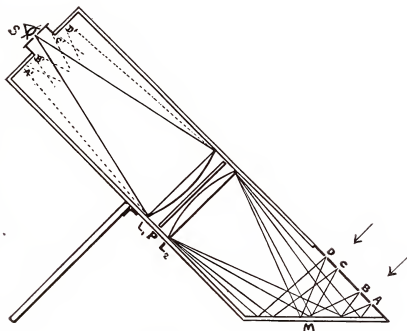


Fig. 6

## "DODGING" THE NEGATIVE

I. H. GREEN

**A**LTHOUGH, as a general rule, a bad negative may be made into a passable one by the hundred and one methods of intensifying and reducing, there are several beginners who for various reasons do not care to tinker about with mercury, ferricyanide and other dangerous chemicals. Some amateurs do not care to have any dangerous poisons in the house for fear of accidents, while others do not care to treat their favorite negatives with chemicals with which there is a chance of going wrong and ultimate ruin. However, if *carefully* carried out, I can see nothing whatever against chemical intensification or reduction. I have several negatives in front of me which were intensified with mercury and reduced by means of ferricyanide, and I can perceive no change in them.

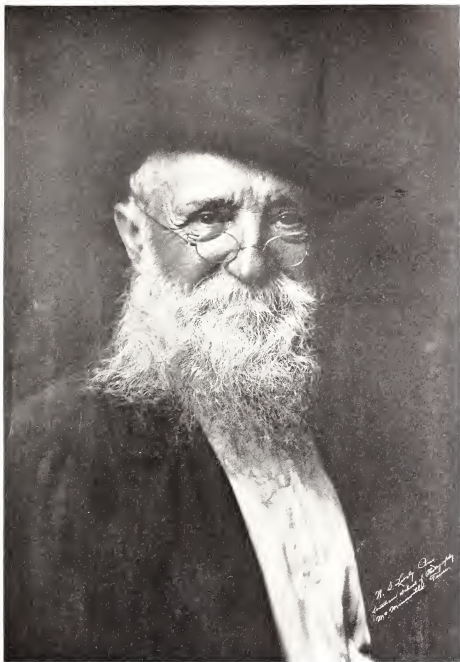
My object in the present article is to put before the readers of this magazine a few methods of dodging and faking negatives without treating the film with chemicals. One of the best methods of securing a contrasty print from a poor negative is to print under green glass. If the printing-paper be the familiar P.O.P. a yellowish-green glass should be used over the glass side of the negative; this confines the action of the light principally to the citrate or other organic salt of silver, which gives more contrast than the chloride. With bromide paper the effect is not noticeable, and with platinum paper the glass must be bluish green for a black negative and yellow for a blue black.

The best way to dodge the printing of bromide paper is to vary the distance from the source of light according to the negative and character of print required. A flatter print, for example, may be secured by printing close to the light, and a brighter one may be obtained by holding the printing-frame at a greater distance away. There are several other little dodges applicable to development papers, but in the present article we must deal only with printing-out papers.

Tissue paper or matt varnish are generally used for faking negatives. If it is decided to use tissue the same must be damped and gummed by the edges only to the negative. This will then dry as "tight as a drum." If, however, we decide to use matt varnish, the same can be bought very cheaply, or made as follows:

Sandarac .....	$\frac{1}{2}$ ounce
Mastic .....	48 grains
Methylated ether .....	5 ounces
Rectified benzole .....	$2\frac{1}{2}$ to 3 ounces

Dissolve the sandarac and mastic in the ether, filter if necessary, and then add the benzole. The less benzole used the coarser the grain. Keep in a well-stoppered bottle, and do not use the varnish near a naked flame, as it is dangerous and is highly inflammable. Be careful to get benzole and not petroleum *benzene*. If preferred, the benzole may be kept separately from the other ingredients, and more or less added to a portion of the ether solution immediately before use, according to whether a fine or coarse grain is desired.



PORTRAIT BY W. S. LIVELY, MCMINNVILLE, TENN.  
P. A. OF A. SALON





W. H. PORTERFIELD

A TOILER OF THE SEA

To keep back a foreground and other dark shadows long enough to allow the densest parts of the negative to print, I pour this varnish over the back of the negative. As soon as the varnish has set, take a stump or a duster and clean off all that has spread beyond the portions it is desired to keep back. If the varnish becomes too firmly set, it may be scraped away with a knife. The objection to matt varnish is that it is very liable to damage, and I find that ground glass has many advantages. To use it, take a piece of ground glass and place it, ground side up, on the top of the negative, film side up; work on it, to increase the high lights, with powdered blacklead or blue pencil — the latter for medium effects. Where it is desired to increase the shadows, use vascline or a little weak gum water; this takes away the matt appearance, and makes the glass trans-



CLEO. S. BOURGEOIS

A DAUGHTER OF THE EAST

parent. After this is done, place the ground glass at the back of the negative and print as usual. A softer effect may be produced by placing the ground glass upon the back of the negative, working upon it and printing as usual. In the latter case, two thicknesses of glass intervene between the paper and ground side of glass; in the former case, only one.

Another very simple way of increasing the density of any portion of a negative is to mix some yellow or orange dye with half an ounce of gum Senegal, and apply thinly with a camel's-hair brush moistened with saliva. It adds enough density to parts of the negative required, without shutting out the detail.

Another very simple and most effective way of improving the printing qualities of a negative is by means of ordinary tissue paper and powdered black-

lead. I cut a piece of tissue paper the same size as the negative, dampen it, and stick it lightly by the edges to the glass side; it dries level and tight, and may then be worked upon with the powdered blacklead by a stump or the finger-tip. Perhaps the sky is thin and prints dark; if so, rub the blacklead upon the tissue paper over the sky portion, where it is intended to print lighter. At frequent intervals in the sky, extra dabs may be put in the form of clouds; these, when properly done, show up very effectively in the finished print. In fact, everything that prints too quickly may be held back by carefully working over the desired part with the blacklead, or a coarse soft pencil.

If in a group the faces print too dark, a touch of light blue paint will greatly improve the result. A blue pencil, too, is exceedingly handy for touching up those parts it is desired to print lighter. If, on the other hand, parts of a negative take a long time to print, or are exceedingly harsh, they may be made to print quicker by dabbing a little vaseline, thinned Canada balsam, or oil upon the tissue paper, or by cutting away entirely that part over the required portion. In the latter case, the paper may be stuck wholly upon the glass. The light, of course, penetrates more rapidly through the parts cut away, thereby helping the denser portions on before the parts covered by the tissue paper have time to go beyond the proper depth.

Another dodge for increasing the intensity of light on the denser portions is by holding a magnifying-glass in front of the frame. The time required for printing the covered patch is considerably reduced. The sun's rays must not be brought to a focus on the negative, or the heat will crack the glass.

A simple method of blocking the sky out temporarily is to hold the negative, glass side down, over a piece of lighted camphor, or the fumes of a paraffin lamp, until smoked quite black, when the surplus upon the landscape portion may be wiped away with a soft rag. Great care in handling the negative is necessary, as the blacking is very fragile and easily damaged. If a permanent blocking out is required, black varnish, non-actinic water-colors, or commercial "opaque" may be used. If the thin parts are all in one portion of the negative, a better plan, after they have printed to the required depth, is to protect them by a piece of card laid upon the outside of the frame, or with a pocket-handkerchief, which can be roughly adapted to the outline between the dense and thinner portions, allowing the printing to proceed through the uncovered portions for a further period.

If a negative be denser at one end than the other, through uneven development or uneven coating (happily now very rare), the printing-frame may be placed at the bottom of a deep, lidless box, one side of the frame resting against the side, the thinner portion being at the bottom.—*The Photographic News, London.*

*Art is the uplifting of the beautiful so all may see and enjoy.*

—ELBERT HUBBARD.





PORTRAIT BY W. N. BRENNER, CINCINNATI, O.  
P. A. OF A. SALON





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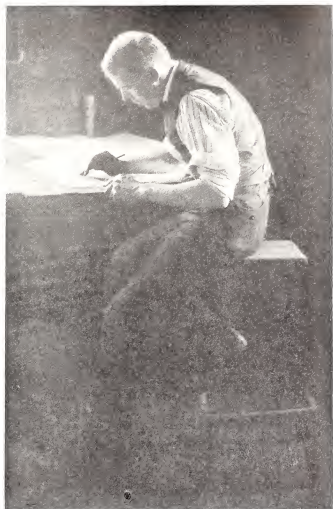
LAWRENCE MACOMBER

A CHINESE SHOP-KEEPER

## WHEN THE PHOTOGRAPHER TRAVELS

DAVID GRAY ARCHIBALD

**I**F you use a plate camera while travelling and include among your traps a dress-suit case, you can easily arrange a place to change plates in. Make an opaque cloth bag large enough to hold the suit-case with its cover extended at right angles. In this bag, have two arm-holes with tapes to tie around your arms when you put them into these holes while changing plates in the bag-covered case. As the plates are arranged in a certain way in the boxes and holders, you need not see them while making the change. It is easy to do this by feeling alone when you get used to it.



CHAS. VANDERVELDE

THE DRAFTSMAN

## CAMEO RELIEF PRINTING

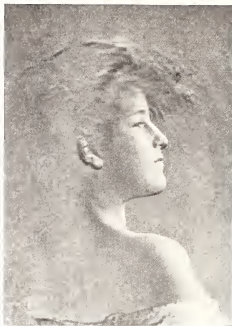
DR. F. DETLEFSEN

**C**AMEO Relief Prints, so-called, may be produced successfully in two ways, briefly outlined herewith. The first method which I employed and published in the *American Annual of Photography* for 1906 is as follows:

From the negative to be used first print a positive on platinotype paper. Use a developer containing acetate of potassium and mercury, the addition of which produces great contrast — bright high lights and dark shadows. The developer is as follows: —



NUMBER 1



NUMBER 2

Acetate of potassium .....	$\frac{1}{2}$ oz.
Citric acid .....	$\frac{1}{2}$ "
Phosphate of potassium .....	$\frac{1}{2}$ "

Dissolve in warm water and add:

Bichloride of mercury ..... 50 gr.

(Previously dissolved in boiling water)

Add enough water to make one pint and use cold.

Now put a clear glass plate into the printing-frame, and on this place the platinotype print which you have just made, "face out." On this lay the negative, "face in," so that the print and negative are slightly "out of register." Next place a sheet of platinotype paper on the negative, film to film; close the printing-frame and print carefully. Expose to direct sunlight, if possible, and print from one to three days, until a fair outline appears. Print less strongly than for ordinary platinotype printing. Develop in acetate of potash and mercury developer.

The second method, employed by me since with results equally as good, is this:

Place paper positive on negative slightly out of register. Next put a sheet of platinotype paper on top of paper positive and close printing-frame carefully. Print and develop.

The prints reproduced with this article are made by the latter process. No. 1 is the ordinary print, and No. 2 is a relief print from the same negative.



JOHN BOYD

THE GARDEN SPIDER—LIFE SIZE

## ARANEOUS PHOTOGRAPHY

JOHN BOYD

SOME people shudder at the sight of a spider; others watch its instinctive actions as a lesson of instruction from the zoological kingdom; but young and old of both of these classes wonder alike at the mathematical regularity of its web.

We might go into a long discourse on the habits of some of the various species, but perhaps it would not be inviting to the worker in photography, yet we can hardly treat the subject intelligently unless we gain a little insight into the habits of the spider — first, as to how its web is constructed; and again, under what conditions it can best be photographed by those who would picture it in all its silken beauty.

Let us take up in as few words as possible that strange and intensely interesting process of making the web of the geometrical, or garden spider, and what is said of it will apply with equal force to the workings of the remainder of the species.

The threads which form its web are not single, as one would suppose, but composed of a number of separate little strands, which are joined together as they emerge from the "spinner," an organ placed at the end of the spider's body. The substance which is emitted hardens very quickly on exposure to



JOHN BOYD

SPIDER'S WEB AMONG THE TREES

the air, but there is a stickiness about it which remains for some time, the use being self-apparent, when we consider that the worker formed it as a trap for flies and other winged insects, and not for an architectural exposition.

The spider begins its web by stretching a line tight across the space where it is to be built; then it fastens another from the centre of this single line to some object lower down; continuing this with an accuracy that is remarkable, it fixes and stretches its threads consecutively until it looks like a wheel with many

spokes. This is the foundation, or frame work, which has still to receive its circular strands. These are put on one after the other with a quickness that is surprising, and almost before we can realize it the whole structure is complete and ready for its victims.

Such, briefly, is the manner in which a spider's web is constructed, and now we are ready to treat of its delineation by the camera and plate.

There is no set time when this can be done, as, unless under very exceptional circumstances, the web can only be pictured successfully when certain atmospheric conditions have prepared it for the photographer.

The spring and fall months are the best to look for these conditions, and even in these, years may elapse before we can be fortunate enough to find an hour suitable for picturing our dainty and fickle subject.

The only time is early in the morning, when the cool air of night has acted on the warm earth, or the cold earth and warm air have combined to form a mist or fog that leaves its moisture on every leaf, and forms myriads of drops on the filmy strands of web that hang quivering in the almost breathless air.

It is then that we must hurry to catch the impression ere the sun's rays dry up the countless drops of moisture which have enlarged the strands of the web to a size that enables the eye to note their construction, and without which we should have to use a magnifier to see the lines at all.

There are two important factors in this work, which, if well chosen, will lead to ultimate success. These are moisture on the web, and the proper background. The first we shall have to leave to Nature; the other Nature leaves to us, though we may frequently have to humor her, when selecting our point of view, for it often follows that the only available standpoint will give the sky or, for a background, what is equally bad, a blotchy mass of sky and foliage, with the latter out of focus. We must try to avoid such positions; but should circumstances render it impossible to do so, we will have to seek refuge in artificial backgrounds. A focusing-cloth, a few branches cut from another tree, or even a sheet of dark paper will suffice. In placing these, on no account should we disturb the moisture on the web we are to picture. The slightest shake at this time will send its beauty to the ground in an instant; for, as stated before, its photographic possibilities rest in the tiny drops of water which have settled there from the descending mist.

We have now called attention to what we deem are the ideal conditions, and shall at once proceed to tell how to utilize the opportunity when these conditions exist.

The worker is not called on to provide any special appliances in this branch of Nature photography, other than a good, rigid tripod clamp and a lens working at full aperture — the former to carry the camera at any angle we may wish, and hold it there; for it is needless to say we shall have to picture our webs from the low grasses in the fields up to the topmost branch of a good-sized tree, hence the necessity for means to elevate and depress the camera as the situation demands.



JOHN BOYD

SPIDER'S WEB COATED WITH DEW

A lens working at full aperture is an invaluable aid, inasmuch as the exposure must be short, owing to the constant and almost unseen quivering of the subject, and the weak light which prevails at so early an hour, the sun being not more than a few minutes above the horizon. These conditions are usually accentuated by the mist or fog, which rarely lifts until the sun has warmed up the air.

The exposure to be given is a difficult question to answer properly, as we have to strive to attain two distinct objects in considering it. First, we must eliminate all motion; and in the second place get as much detail in the surroundings as is possible. The first is not so difficult, as one fifth to one tenth of a second will give a sharp image, unless the breeze is very strong; these exposures will also suffice for the web itself, which is fairly actinic, but the details in the trees or grasses will suffer if the light is poor. Still, there is no help for it, and we shall have to be content to let the web image predominate, with all the other surroundings subservient to it.

A non-halation orthochromatic plate of the fastest speed is the best to serve us in this class of work, and a weak pyro-soda developer seems best adapted to bring up an image as near to the original as photography can make it.

If you have not an orthochromatic plate handy, a fast non-corrected one will do nearly as well, but the first-named seems to answer best for foggy weather, as it certainly does for distant scenes with their intermediate haze. On no account should we voluntarily use a plate that is not backed or double-coated.





JOHN BOYD

SPIDER WATCHING HIS PREY

The backing-medium is so easily applied, that there is no excuse for the worker making a second-class negative when, by a little extra effort, he can have the best definition and the truest effects by coating his plates with one of the many mediums now on the market. I consider the use of plates prepared in this way as essential to success in araneous photography as with interior or night scenes by artificial light.

If our results are to be used for "record" work, and I believe most of them will be, we had better print on glossy paper. Solio or Self-Toning for daylight printing, and Velox, Cyko or Argo of the development class, will all define the details with an accuracy that is satisfying, so that if the focusing, exposing and developing is carried out intelligently, the results will bear inspection under the magnifying-glass, showing up in a wonderful way the beauty that lies hidden from the naked eye.

The reader is now invited to probe the mysteries of the web, feeling sure that there is no danger of getting "tangled" in its meshes. The "sticky" spots catch only those who are hasty and pay little or no attention to that which is before them.



AGNES TOMLINSON

A DISPUTED RIGHT OF WAY

KODAK EXHIBITION

## A TRIUMPH IN KODAKERY

WILFRED A. FRENCH, PH.D.

THE old adage that a thing worth the doing should be done well is illustrated in an eminent degree in the case of the itinerant exhibition, with its attendant lectures and technical demonstrations, now being accorded the principal cities of the United States by the Eastman Kodak Company. A reference to this enterprise, together with a suitable editorial, appeared in the last issue of this publication. We commented in terms of praise upon the character and excellence of this extensive display of pictorial photography, as well as to the profound and wholesome impression it left upon the minds of the community privileged to see it. It is a matter of congratulation that the parties who have projected and are financing this great enterprise are not obliged to weigh the cost, which is, of necessity, very considerable. They have opportunities that are unexcelled, if, indeed, they are not unprecedented, for collecting rare and valuable material from every quarter of the globe, from which to form a convincing demonstration of the possibilities of practical photography. Hence the spectator is impressed by the extraordinary range in the



H. B. CONYERS  
THE LEMON  
KODAK EXHIBITION



choice of subjects, which include scenes of uncommon interest from every clime, from the ice-bound shores of Prince Rudolph's Land to the heart of tropical Africa. The collection abounds in pictures of strong artistic appeal and pictures that speak directly to the heart. No wonder, for the best skill in the photographic world is here worthily represented. We find the names of such well-known pictorialists as Annan, Davison, Hinton, Stirling, Leduc, Alfieri, Myra Wiggins, Pringle, Steichen, Benedict, Stieglitz, Emma Farnsworth, Cline, Nellie Coutant, Nancy Cones, Eickemeyer, Agnes Tomlinson, Dr. Dixon (the distinguished lecturer of the Eastman Kodak Company) and many others. A remarkable series of three enlargements from Panoram Kodak negatives by Anthony Fiala reveal the true character of the icy North, latitude 81°, and a high standard of pictorial beauty, commanding general and profound admiration. Among the many technical achievements on view, we instance "Feeding-Time," by Dorothea Seton — a good-sized enlargement with perfect proportions and sharpness of detail, made from a Brownie negative.

This notable collection is made up of about three hundred enlargements by the bromide process, a grateful medium for revealing the artistic character of the photograph; yet whenever an exposition of detail is deemed of supreme importance, it is in evidence. The high character of the enterprise so impressed the art critic of the *Boston Transcript*, William Howe Downes, that he not only visited the exhibition repeatedly, but made it the subject of special articles in his paper. The most popular feature, however, was the daily illustrated lecture by Dr. Joseph K. Dixon, one of the best-equipped speakers on the lecture platform to-day. An eminent Bostonian volunteered the declaration that Dr. Dixon was a worthy successor to John L. Stoddard, than whom America never had a more brilliant and successful lecturer — high praise, indeed, and well deserved. It is with a powerful combination of pictures and oratory such as this, that the Eastman Kodak Company is making fresh conquests, yielding results that are bound to be of permanent value. From an educational standpoint this exhibition, with its accompanying lectures and demonstrations, has already proved of inestimable value to the throngs who have visited it. As a means of deepening the interest in photography and increasing the demand for cameras and photographic supplies, the Kodak Exhibition is an overwhelming success; the dealers can testify to that. In the "Notes and News" of this issue will be found the itinerary of the Eastman display, which, with all its original features, will appear in the cities as advertised.



## DREAM ON

WILDIE THAYER

HOPE on, dream on, ambitious soul,  
And never greet despair;  
'T is better to build castles  
Than dungeons in the air.

## ON THE USE OF ALUMS IN COMBINED TONING AND FIXING BATHS

THOSE untiring investigators A. and L. Lumière and Seyewetz have recently conducted a very interesting series of experiments on the use of alums in combined toning and fixing baths, and the comparative values of chrome and ordinary alum when used in such solutions. The results of these experiments, as published in the *Marseille Revue Photographique* for October, we have summarized below.

As is well known, common alum is used as an ingredient in combined baths, its object being to harden the film of gelatine prints. The quantity usually employed for this purpose produces only an imperfect hardening, and the gelatine surface of the prints being liable to soften, the bath must, therefore, be considerably cooled when used during hot weather or in tropical climates. The ordinary method of preparing the combined bath, which is to add alum to a hot solution of sodium hyposulphite, was found, in the course of the experiments above mentioned, to be in a large measure responsible for the inadequacy of the hardening-process, because of the precipitation of the major portion of the aluminium contained in the alum.

On the other hand, if the solutions were cold, both aluminium and sulphur were precipitated, the latter due to the decomposition of a portion of the sodium hyposulphite by alum. It was discovered, however, that sodium bisulphite possessed the quality of rendering this decomposition practically negligible in a cold solution, so that a perfectly clear bath might be obtained. It then became a question as to the relative hardening-qualities of chrome and ordinary alum, and experiment showed that ordinary alum produced the most perfect insolubility of the gelatine film of the paper. While ordinary P. O. P., toned and fixed without hardening, will not resist a temperature greater than 95° F., it was found that with chrome alum added to the bath the temperature might safely be raised to 140° F., or with ordinary alum to 176° F. The maximum hardening-effect was obtained by adding, to the usual toning and fixing bath, about eighteen grains of common alum per ounce of solution.

Furthermore, it was ascertained that the largest quantity of sodium bisulphite which could be introduced into a combined bath containing this amount of alum, without any detrimental effect, was about five minims of sodium bisulphite to the ounce of solution. After repeated trials, in which the relative proportions of alum and bisulphite were systematically varied, Messrs. Lumière and Seyewetz have adopted the following formula:

Water .....	20 ounces
Sodium hyposulphite .....	5 "
Sodium bisulphite lye .....	100 minims
Acetate of lead .....	20 grains
Common alum .....	400 "
Chloride of gold .....	6 "



PORTRAIT BY GEORGE G. HOLLOWAY, TERRE HAUTE, IND.  
P. A. OF A. SALON



In this solution prints tone a little more slowly than in ordinary combined baths, but air-bells are avoided, the bath remains clear and moderately warm water may be used for subsequent washing, resulting in a saving of time, not to be despised.

It may be well to say a word here regarding sodium bisulphite lye or the liquid forty per cent (commercial) solution of acid sodium sulphite referred to. The preparation is much used in Europe, but if any difficulty is experienced in procuring it, it may be prepared in accordance with the following formula:

Sodium sulphite anhydrous .....	60 grains
Pure sulphuric acid .....	13 minims
Distilled water to .....	1¼ ounces

This is equal to one hundred minims of the acid sulphite lye.



## SOLITUDE

WILDIE THAYER

LIKE a hermit of the wood,  
Stands a tree in solitude;  
Widely do its branches spread  
For a canopy o'erhead.  
In its arms, sweet song-birds nest;  
In its shade, tired travellers rest;  
Noble, grand, protecting, free,  
Is this solitary tree.

King of trees, apart it stands,  
Monarch of the forest lands;  
To perfection has it grown,  
Stronger, that it stands alone.  
Solitude has been its friend,  
Bidding it aspire, extend.  
It could not so mightily be  
Were it not a lonely tree.

Storms may beat: it firmly stands;  
Outward reaching it expands.  
Smaller growths cannot intrude  
On its royal solitude;  
Calm, courageous, strong, upright,  
Facing ever toward the light.

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Lonely soul, to Nature turn;  
From this tree a lesson learn.

## THE OZOBROME PROCESS

THE method of "chemical printing" invented by Mr. Thos. Manly, of the Ozotype Company, has been before the photographic world only three months, and yet, so far as we can judge, has not yet aroused the interest which would have been anticipated from its remarkable character. It would seem that the process is such a complete revolution in methods of photographic printing that experienced printers are inclined to dismiss it without investigation of its powers by a series of practical tests. Ozobrome, however, as we were the first to assert, is no freak process or *tour de force*, but a method — of extraordinary simplicity — possessing facilities which must surely prove tremendous advantages in the eyes of both professionals and amateurs.

In the first place, ozobrome yields a carbon (pigment) image indistinguishable from a carbon made in the ordinary way.

This carbon print is made directly from a bromide print or enlargement, and it is unreversed.

The printing (in the dark) of the carbon from the bromide is done in about the time required for daylight exposure.

The bromide, after use, may be restored to its original condition. The whole series of operations is performed in broad daylight, or by any artificial light that may be preferred, and may be mounted and finished.

To the amateur worker who has not the opportunity of daylight for a large proportion of his work these facilities require no comment or emphasis. The professional photographer or trade enlarger can hardly help regarding the process with special interest from the point of view of lessening the cost of reproducing carbon enlargements. Hitherto an enlarged negative has been indispensable, and in contrast with ozobrome the cost of the materials may be compared thus:

### *15 x 12 Enlargement via Enlarged Negative*

	s.	d.	
Contact Transparency, say .....	0	2½	\$0.05
15 x 12 Negative Plate .....	1	6	.36
	1	8½	\$0.41

### *15 x 12 Enlargement via Bromide*

15 x 12 Bromide .....	0	6½	\$0.13
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The cost of "printing" ozobromes from the bromide should be less for labor than in making carbons by the ordinary method, and would compensate for the slightly increased cost of the ozobrome tissues (pigment plasters) compared with ordinary carbon tissue.

The figures given above leave out any value of the bromide print, although, of course, a considerable sum might be obtained for it either in its raw state or worked up. It is to be expected that one bromide enlargement, in conjunction with one or more carbons of the same size, will become a stock line among photographers; but in any case it is to be hoped that the profession will make the





PORTRAIT BY GEO. J. ROGERS, DETROIT, MICH.  
P. A. OF A. SALON.



lessened cost of production the opportunity of extracting a larger profit from such extremely "cut" specialties as carbon enlargements.

THE REV. H. W. DICK ON OZOBROME

On September 26, the fixture at the North Middlesex Photographic Society was the Ozobrome Process, demonstrated by the Rev. Henry W. Dick, of Manchester. Mr. Dick, who has several times lectured before the society, was met by a large audience, who fully appreciated the opportunity of witnessing the demonstration of Mr. Manly's fascinating process. Many other photographers would doubtless have been glad to have attended had the occasion been announced. The demonstration was, however, arranged at short notice, Mr. Dick kindly consenting to devote an evening to the subject in his passage through London for a brief holiday in Normandy.

He explained that the whole of the preparations for the demonstration had been made for him by others, and that therefore the success (or failure) of the proceedings was not to be credited to himself. The demonstration, however, was completely successful.

The lecturer explained that the basis of the process was the contact of a bromide print with a piece of carbon tissue, or pigment plaster, as Mr. Manly called it, this contact producing the effect of light, and giving rise to a print which was to all intents and purposes a carbon. The bromide was bleached during the course of the process; but it could be used again and again if desired, or it might be made the basis of the carbon print, in which case certain advantages were obtained. In both cases the bromides should be good prints, fully washed to free them from hypo, the presence of which would unfit them for the process. The reason of this was that the solution with which the carbon tissue (pigment plaster) was impregnated contained ferricyanide of potassium, which, with any hypo in the print, would form Farmer's reducer, and so destroy the silver image of the bromide in places. The gelatine film of the bromide should also be hard, in order that it might not soften under the action of the hot water used for development. The prints could be treated with a ten per cent solution of formalin, but it was not absolutely necessary to use this bath, though probably advisable to do so, unless the prints were to be dried before being placed in contact with the treated tissue (pigment plaster).

The bath in which the tissue or plaster was immersed prior to contact was called by Mr. Manly the "pigmenting-solution." It consisted of potassium bichromate, potassium ferricyanide, alum and citric acid. The solution was prepared and placed on the market by the Ozotype Company, though the lecturer believed that in the event of the secret of its preparation being lost he could resupply it.

The solution as purchased was mixed with four or less times its bulk in water. The stronger the bath, the more quickly the transfer of the bromide image to the tissue would take place. However, an average formula would be as follows:

Stock solution .....	2 ounces
Water .....	8 "

The tissue was placed in this solution, and at once swabbed all over on the gelatine side in order to remove air-bells and obtain a complete action of the solution. A minute or two was sufficient for the process, the only action of which was to impregnate the tissue with the solution. The bromide print was soaked in clean water until flaccid, and the treated tissue then removed direct from the pigmenting-solution, and brought at once face down upon the picture side of the bromide print lying face up in the dish. The bringing into contact of the two prints must be done smartly, as the action of the solution adhering to the bromide commences at once. The pair is removed (in contact) from the water and immediately laid on a piece of glass, the bromide underneath. A few strokes of a squeegee are quickly applied to remove excess of the solution, and the double paper laid under slight pressure — e.g., a sheet of plate-glass about one-quarter of an inch thick, and somewhat larger than the print — for about twenty-five minutes or half an hour.

The pressure on the prints should be even; if it is greater at one point than another there is likely to be a line showing in the final ozobrome print. But a pile of prints of the same size may be laid together under pressure without any evil results.

The contact between the prints and the tissue is only of service whilst the two are wet. If the time is so long that the tissue or the bromide print dries, the action comes to a stop. Mr. Dick could not say whether the action would take place more quickly if the print and tissue were laid under pressure together in a warm, moist place, but he was inclined to think that there was likely to be little advantage in this direction, as the tissue would adhere permanently to the bromide print on moderate elevation of the temperature, and therefore the preferable form of the process in which the final ozobrome is obtained without the presence of the underlying bromide image could not be carried out.

Clean water must be used for each bromide print — that is to say, the water must not be contaminated with the drainings from the bichromated tissue, or the print will commence to bleach before it is in proper contact.

In regard to the time during which a print should remain in contact, the lecturer said that it was difficult to over-print, but the temptation to cut down the time of contact should be resisted. In making a number of prints, no time was wasted, and twenty-five minutes could be given to each print.

This first process was preferred by Mr. Dick on the ground that when certain modifications — not suggested or authorized by Mr. Manly — were made, the richness of the final print was greater than by the other process, and afforded facilities for remedying defects in negatives which were very valuable. Nevertheless, the second process, in which the pigment print is obtained, supported on single transfer paper, the bromides being liberated for repeated use, was the one which the lecturer advocated for regular work. The method of employing process No. 1 is as follows: The bromide prints and tissue (pigment plaster), after twenty-five minutes' contact, are placed together in warm water, about 100 deg. Fahr., or, say, about as hot as the hand will bear. The paper support of the pigment film

then becomes loose from the solution, in the hot water, of the soluble gelatine film, and can be stripped off, leaving the pigment image on the surface of the bromide print. Development is done in the usual carbon manner by laving hot water over the surface of the print, and removing to a dish of cold water when finished. The print now consists of a complete pigment print, with a bleached or partially bleached bromide underneath. This latter can be employed in several ways:

1. It may be removed altogether by the Farmer reducer.
2. It may be redeveloped with any developer.
3. It may be darkened with the ordinary soda-sulphide solution used in the sulphide toning-process.

The first of these procedures will be adopted if the print leaves nothing to be desired as regards vigor. If, however, it lacks strength, the application of either solution — developer or soda sulphide — will improve it.

In either case, it is a curious thing that more detail is shown in the ozobrome print than is visible in the original bromide. In fact, according to Mr. Dick, this is the case even if the bromide image is altogether removed. It is suggested that some invisible constituent of the bromide comes into play in the ozobrome process. It is sometimes found that in ozobrome, as worked according to this first method, the resulting ozobrome may be flat, apparently due to some scattering effect of the lights in the subject. The addition of a little alkali (ammonia) to the pig-menting-solution will remedy this, and is a great advantage in preparing ozobromes from flat prints. The quantity of ammonia may be about ten minims of ten per cent solution of ammonia to about eight ounces of pigmenting-solution. Addition of potassium citrate would give the same result, the lecturer stated, but he was unable to say whether its action was due to any alkalinity of the compound, or whether a neutral citrate would give the same results as ammonia.

In the case of subjects with too much contrast (in the bromide print) a little acid added to the pigmenting-solution would remedy matters.

The second method of ozobrome was described as that which would be adopted for regular work, as it was independent of a bromide image underneath. It was as easy to work as the former. The first part of the procedure is the same for both methods, the print and treated tissue being placed in contact, while wet, for about twenty-five minutes. Instead of developing at once in hot water, the tissue and bromide print in contact are laid in *cold* water and the bromide print pulled off, the two being under the water while this operation is performed. A piece of single transfer paper, which has been soaked in water for a few minutes, is then brought face down on the exposed surface of the tissue and the two removed together from the water. They are squeegeed in contact and laid under a weight, such as a piece of plate-glass, for a quarter of an hour. The pair are then placed in hot water and developed in the usual way, already described for the first process, being finally soaked in cold water, and given a brief bath of alum and a final wash in water.

Mr. Dick showed a number of prints made by both variations of the process,



PORTRAIT BY BELLE JOHNSON, MONROE CITY, MO.  
P. A. OF A. SALON.



and stated that the three prints by himself in the Royal Photographic Society's Exhibition were ozobromes.

The very greatest interest was manifested by those present in the process, which, it was acknowledged, fulfilled all the claims which were made for it, remarkable and almost incredible as some of those claims were. The advantage of the chemical printing of the copies without light and of the non-reversal of the prints was commented upon, and Mr. J. C. S. Mummery, in proposing a vote of thanks to Mr. Dick, expressed the hope that good use of the process would be made by members in the weeks which remained before the opening of their exhibition.— *British Journal of Photography*.

#### [OFFICIAL INSTRUCTION FOR OZOBROME

— Since the publication of the first directions for the working of Mr. Manly's process, the following additional notes have been issued by the Ozotype Company, supplementing the directions appended to the article by Mr. Foxlee, which appeared in our September issue.

It is possible that one part of the concentrated pigmenting-solution to five parts of water may not be strong enough to completely bleach a deeply printed enlargement. Perhaps one part of concentrated solution to four parts of water might be considered as the average strength of the pigmenting-bath. This strength will keep better than one part to five parts of water.

In Method No. 1 the bromide picture should be printed with a white margin of about a half-inch all round, to serve the purpose of a safe edge, so as to prevent the edges of the picture from frilling during development.

In contact-printing the margin formed by the rebate of the printing-frame is generally sufficient, but in making enlargements the margin of the bromide paper should be protected. This may be effected easily in the following manner:

Take a sheet of cardboard the size of the bromide paper (the strawboard packed with the sensitive paper will answer admirably), paste or glue strips of thin cardboard or stout paper of any color along each edge of the card, allowing about half an inch of the paper to project from the edge. When dry, turn the half-inch edge over the card, so as to form a kind of sheath, such as is used for carrying plates in some magazine hand-cameras, but, of course, with four edges protected. You have now a very handy contrivance, which will be serviceable always. When about to expose, slide the sensitive paper into the sheath by unbending one side and replacing it. Adjust on the easel by pinning through the card.

In Method I., the bleached image beneath the carbon picture may be re-developed partially or entirely, and this may be made use of in various ways. For instance, a weak bromide may be converted into a strong print by reblackening the underneath image, and many beautiful effects may be secured by causing the redeveloped silver to modify the tone of the semi-transparent carbon picture.

If a weak developer be applied with a brush, local intensification may be effected, and a sky which is hardly strong enough for the rest of the picture may be made heavier in this way.

The underlying image may also be toned by the various bromide toning-solutions.

Of course, the developing or toning solutions must be removed by washing for about fifteen minutes.

The redeveloped silver image, being protected from the atmosphere by a layer of hardened gelatine, is naturally much more permanent than an ordinary bromide print.

#### MATERIALS FOR THE OZOBROME PROCESS

The necessary materials for working the process are now put upon the market by the Ozotype Company, 1 Weedington Road, Kentish Town, London, N. W. They are, first, the "Ozobrome Pigmenting Solution" and second, the "Ozobrome Pigment Plasters and Transfer Papers." The solution is put up in four, eight and twenty ounce bottles, in concentrated form, being diluted for use with four to six times its bulk of water. The bottles cost \$0.32, \$0.48, and \$0.56 respectively. The pigment plasters are supplied in twelve colors, as follows: engraving black, warm black, blue-black, sepia, warm sepia, portrait brown, terra-cotta, Van Dyke brown, red chalk, marine blue, sea green and Italian green. They may be had either in bands thirty inches wide and twelve feet in length, price \$1.68, or in cut pieces, these pieces being slightly larger than the regularly listed sizes, for convenience in working. Four kinds of transfer paper may be had; viz., fine, white smooth, medium grain matt, white etching and toned etching, the price being \$0.90 per band. We have published these prices in order that our readers may see that the process is not an expensive one. A bromide print, a squeegee, some of the Ozobrome solution, pigment plasters and transfer paper are all that is required for working it. In fact, a supply of the necessary materials for  $3\frac{1}{4} \times 4\frac{1}{4}$  work can be secured for about \$0.60.

The Ozobrome pigment plasters and carbon tissue have been spoken of in the accounts of this process in such a way that one might suppose that the terms were synonymous; but it may be well here to explain that there are marked differences between ordinary carbon tissue and that which has been placed upon the market for Mr. Manly's new process. The chief difference lies in the fact that the Ozobrome plasters contain a much smaller proportion of gelatine than the tissue employed for ordinary carbon work. As this difference is an important one in the process, those who wish to avoid difficulties will do well to employ the particular materials which Mr. Manly has found to be most suitable.



#### BEFORE THE TEMPEST

ISABELLA HOWE FISKE

A THREATENING bar of storm-cloud  
Hangs over darkening seas  
That seem to shudder under  
Its sword of Damocles.



R. DUEHRKOOP.

THE CHILDREN'S THANKSGIVING DINNER.



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## EDITORIAL DEPARTMENT

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### THE P. A. OF A. SALON

WE reproduce, in this issue, for the benefit of our readers, several of the pictures taken from the Salon of the P. A. of A. Convention, held at Niagara Falls, N. Y., in August last. These pictures are of interest as showing the high-water mark of cultivated mind in professional photography in this country to-day. We do not presume to pass judgment upon these pictures as final, but one looks in vain for the great masterpiece in this collection that is to revolutionize professional photography in America. By a singular coincidence there were exhibited at this convention the amateur photographs of The Second American Salon, and we believe that, without disparagement to professional photography, the professional can learn much from these pictures of the amateur — not because of any superiority of work on the part of the amateur, but simply because he has gone about his work in a different way and has emphasized certain truths that are necessary for success in picture-making. For example, the prevalence of the soft-focused picture, in the amateur Salon, gives, undoubtedly, a greater illusion of atmosphere and of light. It is a decided gain for the picture. It eliminates all fine lines and blurs the coarser ones, but preserves, in subordinating these details, the artistic effect of the photograph. The professional focuses sharply and reaches the same result by retouching his negative, which oftentimes destroys or impairs the character and likeness of the photograph. In defence of his position, on the soft-focused question, the amateur photographer will tell you that the greatest portrait-painters, since the days of the Renaissance, have always used it when the art of painting had certainly reached its greatest development. The amateur studies the painters, and we believe that he is without doubt right in this respect.

Another excellence in the amateur work to which we would call attention is his method of illumination: his accessories are simpler, he depends more upon natural lighting, and in this the painter agrees with him. Only one light, as a rule, and never more than one source of reflected light, is a safe rule to follow. The use of backgrounds is a mistake, especially when they are obtrusive or so insistent that they jump out at you from the picture. The question of tones in a photograph is oftentimes a mere matter of taste, but the amateur photographs gain greatly in charm over the professional by the taste which they show in the use of tones in the pictures. To sum up the great lesson of the amateur photographer to the professional, it is embodied in three words,— study the painters. We therefore recommend to our professional readers a careful survey of The Third American Photographic Salon which is about to be opened in New York. We believe that it will help them to a larger appreciation of the possibilities of their profession.

## ART

SOME great writer has said that art is the beautiful way of doing things, and again that art is only the expression of a man's joy in his work. In his autobiography, Herbert Spencer speaks with no uncertain sound on this subject of joy in work. Certainly if one cannot take pleasure in one's work the work will not be good for much, because artistic work is the expression of pleasure. It does not follow, of course, that there is not pain and toil in any search for excellence, but the outcome must mean joy ultimately or the work fails of its purpose. We do not sympathize much with that form of asceticism which makes it a wrong to do a thing for the pleasure of doing it. We believe that so long as no injury is inflicted upon others nor upon one's self, and so long as the various duties of life have been properly discharged, the pursuit of pleasure for its own sake is perfectly legitimate and requires no apology. The opposite view has been recently styled "a remote sequence of the old devil-worship of the barbarian, who sought to please his god by inflicting pains on himself, and believed his god would be angry if he made himself happy." The photographer who works in this spirit, crudely, perhaps, but with intelligence and joy, will make pictures out of the ordinary because impelled by a fine instinct for workmanship. Morris, the poet and idealist, considered labor not at all as a curse, nor as a punishment for disobedience, nor as a material commodity, subject to exchange and barter, but only as an expression, a medium, for feeling, sentiment and imagination. For want of a better word we call the product of photography, under these conditions, art-craft — a term signifying the central fact in the Arts and Crafts movement of to-day, the romantic union of art and labor.

## THE PHOTO-ERA

AT this season of the year the majority of people are making their selections of magazines for the coming year. Every one who is interested in photography should take a photographic magazine to learn the latest and most up-to-date methods and appliances in this great art science. Many amateur photographers do not take a photographic magazine because the matter is not properly presented to them, or because they are not acquainted with a good magazine. We publish the best photographic magazine in America. PHOTO-ERA, the American Journal of Photography, is recognized by common consent to be at the head of the procession. No other magazine in its class can be compared with it for up-to-date, thorough and carefully prepared articles on matters relating to art and photography in all its branches. No progressive photographer can afford to be without it. We invite the attention of our readers, this year, to the splendid offers made elsewhere in our pages, in combination with the other leading publications of the country. The opportunity to secure the best periodical literature that the country affords, at bargain prices, is greater now than ever before. We trust that all our readers will be able to take advantage of this great opportunity, and will send in their renewals before these generous offers are withdrawn. Do it now!

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## THE ROUND ROBIN GUILD

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*Conducted by Elizabeth Flint Wade. Specially designed for the amateur photographer and the beginner. Membership may be obtained by sending name and address to the PHOTO-ERA.*

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Do you know Dickens's description of November?

No? Then listen, and you shall hear it.

"Fog everywhere. Fog up the river, where it flows among the meadows; fog down the river, where it rolls among the tiers of shipping, and the waterside pollutions of a great city. Fog on the marshes, fog on the heights. Fog creeping into the cabooses of brigs; fog lying out on the yards and hovering in the rigging of great ships; fog drooping on the gunwales of barges and small boats. Fog in the eyes and throats of old pensioners wheezing by the fireside of their wards; fog in the stem and bowl of the afternoon pipe of the wrathful skipper, down in his close cabin; fog cruelly pinching the toes and fingers of his shivering little 'prentice-boy on deck. Chance people on the bridges peeping over the parapets into a nether sky of fog with fog all around them, as if they were up in a balloon and hanging in the misty clouds."

Is n't it a vivid picture of our November days—days of fog and mist and clouds, days which seemingly offer no opportunity to the amateur to pursue his favorite avocation?

But listen, these November days are just the days when one may secure some of the most artistic effects which his camera is capable of producing. Fog, though it seems almost impenetrable to the eye, has really a great deal of luminosity. Consequently, the amateur who is oblivious to the weather may encase himself in mist-proof coverings and, sallying forth with his camera, may succeed in getting those atmospheric effects which are so skillfully portrayed by the artist of the brush but so seldom attained by the artist of the lens.

November, then, is the month when, especially along the shores of lake and ocean and water-course, or low-lying meadows, and even in the city streets, one should seek for and find picture conditions not to be found in any other month of the year. This coming year one of the subjects is to be pictures taken on foggy or misty days, so be warned in time and make the most of the hours of the short November days.

### BROMIDE PAPERS

The quick printing gaslight papers, with their varying degrees of speed, their soft and their contrasty effects, have almost driven out of the market the old-time bromide paper. But there is a reaction, and there is to-day on the market a very beautiful bromide paper capable of producing most delightful effects, equal to the most careful daylight printing. It is a slow paper, and develops up into clear, velvety blacks and pure soft whites. Being a slow emulsion, one has great latitude in exposure, and by using a slow developer the picture is entirely under one's control. The most satisfactory developer for this paper is the eiko-hydrochinon. The formula for this developer is as follows:

#### *Solution 1*

Water.....	10 ounces
Sulphite of soda .....	2 "
Eikonogen .....	165 grains
Hydrochinon.....	80 "

Dissolve and add enough water to bring the solution up to sixteen ounces.

#### *Solution 2*

Water.....	10 ounces
Carbonate of potassium ....	1 ounce
Carbonate of soda .....	1 "

Add enough water to bring the amount up to 16 ounces. ■!

To develop, take an ounce of each solution and add six ounces of water. Place the bromide print face down in a tray of clean water until the surface is thoroughly wet. Remove and place face up in a porcelain tray and flood with the developer. Rock the tray gently until the print has reached the right stage of development, rinse and place in a fixing-bath of one ounce of hypo to eight of water.

One may develop a print locally, bringing out some portions more and holding others back or leaving them out entirely. To do this first wet the print as directed, then place in a tray of very weak developer until the detail begins to come out enough so that one can distinguish the outlines easily. Remove from the tray, rinse in several changes of water, then lay the print face up on a sheet of glass and with a soft camel's-hair brush about an inch in width use strong developer and paint over the places which it is desired to bring out and leave the rest untouched.

One brand of this bromide paper is coated on a heavy yellow-tinted paper, and when developed and toned in an alum bath has the effect of an old engraving, especially when the picture has fine detail.

The picture, after being developed, is toned in an alum bath made after the following formula:

Hyposulphite of soda .....	2½ ounces
Powdered alum .....	½ ounce
Granulated sugar .....	½ "
Water .....	18 ounces

Heat the water to boiling-point and stir in the soda and alum and sugar. Have the ingredients thoroughly dissolved, then filter through filtering-paper and let the bath stand twenty-four hours before using. The solution has a milky appearance and can be used repeatedly. The print is first put into a cold bath of the toning-solution, then transferred to a hot bath of the same, having a temperature of about 135° F. Leave it in this hot bath until the desired tone is reached, then transfer to an alum bath made of

one ounce of alum and sixteen ounces of water. Leave it in this bath for two or three minutes, then wash and dry.

Beautiful sepia tones are obtained in the hot bath, varying in depth the longer or shorter time the print is left in the bath.

This paper is so heavy that prints may be made with wide margins and will require no after-mounting.

#### THE TWENTIETH-CENTURY PHILOSOPHER'S STONE

There are very few young people who would not welcome an addition to their spending-money. Often one wants a few dollars over and above his allowance for some special purpose, for some coveted object just beyond one's available means. If this extra money can be obtained by one's own labor it is doubly appreciated and enjoyed.

Now the owner of a camera — though perhaps he has never thought so — has the "open sesame" to many doors of money-making denied to his companions who do not possess one of these magic boxes. A camera is really not unlike the fabled philosopher's stone, which was believed to turn everything it touched into gold.

What the eye of the owner of a camera sees the eye of the camera can catch and the sensitive plate perpetuate, and one can use his camera to catch such pictures as shall be of commercial value. It is a picture-loving age, and all the events of life are portrayed in pictures. The photograph, on account of the facility with which it can be made, is the choice *par excellence* of all methods of illustrating passing events. Therefore the wise amateur, keeping in mind the illustrative value of whatever scenes pass before his vision, and being armed and equipped with a pocket camera, can earn many dollars by taking advantage of the pictorial events which daily present themselves.

One thing which specially recommends the camera as a wage-earner is the fact that it can be used equally as well by girls as by boys. Girls have not so many



HANA ROBISON

FIRST PRIZE

ways of earning money as have their brothers, but their wish for it is just as great, if not greater, than theirs.

Photographing of wild birds and wild animals, once considered as almost impossible and requiring great patience and great caution, has by the use of the telephoto lens become a very simple operation. Such pictures are always in demand, for it is only recently that the wild things of field and forest have been portrayed in their native haunts, consequently all such pictures have the merit of novelty.

Boys can take advantage of the pop-

ularity of these pictures and with patience and care make many excellent saleable prints. Girls have not the privilege of roaming woods and fields by themselves, so in the line of photographing animals it is necessary that they keep near home, confining themselves to the domestic animals. The most graceful animal, and one whose picture always delights, is the kitten. One young woman living in the South has been so successful in photographing kittens—of which she has quite a number—that she earns from ten to twenty dollars weekly by the sale of her pictures, disposing of them to illustrated

papers and also selling the daintily finished and mounted prints.

If one lives in a village, where there is less opportunity for making commercial pictures than in the city, try the making of pictures of people in their homes. One of the late ways of making pictures is to make several poses of the same person and print and mount them as one picture. This can be done by the amateur as well as by the professional. Suppose one should make several pictures of the house-mother, each one depicting some phase of her every-day life, print them in uniform style, and mount either in a folder or on one long sheet. It would be an advertisement of her skill which would, when exhibited, bring in many orders for Christmas work. Such pictures are highly prized as holiday remembrances, and one should not be modest about exploiting one's talent when it is needful to add to the income.

Though November days are short and dark, still there are many days on which negatives may be made, and the gaslight



MAUD S. LEE

SECOND PRIZE



H. E. PARMENTER, U.S.N.

THIRD PRIZE

papers make one independent of sunshine.

Do you want a few extra Christmas pence? Then ask your camera how you may make them, and it will quickly answer the question to your great satisfaction.

The amateur finds his camera a very helpful friend when Christmas looms on the horizon and the question presents itself, "What shall I give to —?"

The reason why the camera answers the query so satisfactorily is because the pictures have a personal interest, being always chosen with an eye to the receiver of the gift. There are many ways and one more in which one can utilize photographs to enhance the value of a Christmas gift. I know of a clever calendar which is now on its way to Manila. It is of heavy cardboard, in size 11 x 14, and near the top is cut an opening behind which is a stiff pasteboard pocket into which are slipped twelve photographs, one for each month in the year. Below the picture opening is lettered,

"If all the year were playing holidays,  
To play would be as tedious as to work."

The one who is to receive the calendar

is a young civil engineer who went out to Luzon last summer, and each picture represents some member of his family busy at a familiar task. His father is busy at his desk; his mother, with work-basket and chair drawn before the fireplace where flames leap gayly, is doing the family mending; his sister is at the piano diligently practising her music lesson—and so on through the year. At the end of the month the upper picture is slipped out and placed behind the others and the next picture appears and holds the place of honor for the ensuing month. There is no doubt but that the recipient will welcome this gift as one of the choicest which he receives, and all it cost was a few shillings and plenty of forethought. The calendar is of course affixed just below the pictures, and on the back is recorded all the dates of the family birthdays.

While on the subject of Christmas gifts the editor wishes to make a suggestion in regard to those who at this season of the year are to be considered specially—the children in hospitals and orphan asylums. Children love pictures, and are very fond of pictures of animals. Whoever has pictures of pet cats and dogs could not make a more acceptable gift than to mount prints of them on cards, write on the back of the mount a little account of the pet and what it can do, and send to the children's ward on Christmas morning, or to the orphan asylum. It takes very little time or trouble, and it will bring cheer and pleasure to the poor children.

#### URANIUM INTENSIFIER

If one has thin negatives with good detail the best intensifier to make a strong negative is found in uranium. One of the well-tried formulas is made as follows: take eight ounces of water and dissolve in it, first, thirty-two grains of nitrate of uranium, and then thirty-two grains of ferricyanide of potassium. Add a few drops of acetic acid, put the negative to be intensified in a developing-tray, turn over it enough of the solution to completely cover it, and let it remain until the

required density is reached. The solution will turn the negative yellow, but this color is eliminated by the after-washing of the negative. Do not wash in running water, but in several changes of water. This is one of the simplest and most successful methods of intensifying weak negatives; in fact, if this treatment does not produce the desired density one might as well throw away the negative.

#### ROUND ROBIN GUILD COMPETITIONS

First prize: Value \$10.00.

Second prize: Value \$5.00.

Third prize: Value \$2.50.

Prizes may be chosen by the winner, and will be awarded in photographic books or magazines published or advertised by us; in enlargements, art portfolios of photogravures, mounts, or other photographic materials advertised by us; or, if preferred, we will send any article of a photographic or art nature which can be bought in Boston for the amount of the prize won.

#### RULES

Membership in the Round Robin Guild, with all its benefits—among which the correspondence privilege probably stands first—is free to all, and we invite every photographer to become a member. Entrance in the monthly competitions is also free to all, whether subscribers to PHOTO-ERA or not.

#### SUBJECTS FOR COMPETITION

October.—“Rainy Day Scenes.” Closes November 30.

November.—“Harvest Scenes.” Closes December 31.

December.—“Snow Scenes.” Closes January 31.

#### AWARDS—MOTHER AND CHILD PICTURES

First prize: Hana Robison.

Second prize: Maude S. Lee.

Third prize: H. E. Parmenter, Lieutenant Commander, U. S. N.

Honorable Mention: Mrs. Chas. S. Hayden, F. S. Andrus, Fedora E. D. Brown, Miss Julia H. Elton, Lewis L. Emmert, Miss Jean S. Hutchinson, Edmund Jandrier, Chas. W. Jerome, Franklin I. Jordan, B. F. Langland, George

K. Muntz, W. S. Rice, John Schork, Wm. Spanton, R. E. Weeks, C. M. Whitney, Mrs. Eleanor W. Willard, Miss Emma L. Williams.

#### ANSWERS TO CORRESPONDENTS

GRACE M.—To remove silver stains from your negative place it for fifteen minutes in a twenty per cent solution of iodide of potassium. Rinse well and transfer to a solution of cyanide of potassium, using thirty grains to an ounce of water. If the stains are of long standing use stronger solutions, but the amount given will usually remove the stains. Use plate-lifters in handling the negative during the process.

B. M. T.—To finish self-toning paper in cool tones place the prints, without washing, in a solution of sulphocyanide of ammonium made of ten and one half grains of the sulpho-ammonium to ten ounces of water. Let them remain for five minutes; wash and fix in hypo bath of one ounce of hypo to fifteen of water. For warm brown tones place in salt water for five minutes, then fix, and wash.

JAMES R. L.—Yes; the monthly competitions which have become so popular a feature of the PHOTO-ERA will be continued. We shall give list of subjects for the quarter so that competitors will have ample time to prepare their pictures.

ALINE G.—Would advise you to try the gas light papers. They have been so much perfected during the past year that one has plenty of choice as to the kind of paper required for certain negatives. Many different emulsions are used, each emulsion being adapted to its own particular class of negative. A card to the manufacturers will bring you a catalogue giving descriptions of each paper.

SELMA L.—Use a plate-lifter in handling plates which are being submitted to the action of poison solutions. Mercuric chloride is a specially dangerous chemical to handle. One of the things which the careless amateur would find very useful on his darkroom shelf is a bottle of lime-water and sweet oil. It prevents the further burning of acids if applied immediately.

B. G. BARTON.—Persulphate of ammonia does not keep well in solution and should be mixed fresh each time it is to be used. You will find it one of the best of reducers, and with it one always has the negative under control. Full directions for its use have been frequently given in the pages of the Round Robin Guild. The prints you send are very artistic, and we should like to see more of your work.

F. G. H.—To clear a negative from pyro stain make up a solution of one-half dram of sulphuric acid, thirty grains of pulverized alum and ten ounces of water. Leave the plate in this solution until clear, wash well and dry. Sometimes the yellow stain on a pyro-developed plate adds to the printing-qualities, so before removing the stain try a print.

CELIA D.—You will find in the October number of the PHOTO-ERA, 1905, in the Round Robin Guild department, directions for finishing platinotype prints; that is, retouching them and taking out defects. This copy will be sent you on receipt of price, if you do not happen to have it easy of access.

ELLIS W.—To stop the toning of aristo prints place them after toning and before fixing in a stop-bath of salt and water, one half ounce of salt to sixteen ounces of water. Keep them in this bath five minutes, rinse and place in the fixing-bath.

H. F. D.—The prints submitted by you to the recent monthly contest were unmounted and only one of the prints marked with your name and address. All prints should be mounted, and each mount marked with full name and address of the sender, also the title of the picture and the subject of the competition for which it is designed. It was necessary for the receiver to mark all of your prints with the exception of the one, and as they were unmounted they were not easy to take care of. All photographs are handled with a great deal of care, and if our competitors would take a little more pains that prints are mounted and marked it would save a great deal of trouble at the office, and then there would be no danger of a possible loss.



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# The Crucible

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## LENS TESTING

To do this very thoroughly requires not only special apparatus, but also special knowledge as well. But for all ordinary photographic purposes this may be done quite easily by any intelligent amateur who will take reasonable care in making the various tests described under the following heads:

*Achromatism.*—Achromatism, when applied to a lens, means that the visual rays and chemical rays are brought to the same focus. If this be not the case, the lens is said to suffer from chromatic aberration. But if these aberrations or defects are properly corrected, the lens is said to be achromatic. A simple test for chromatic defects may be made by cutting a very narrow slit in the centre of a thin sheet of card or opaque paper. Let the slit be about three inches long. Cover up an inch at one end with a piece of ruby glass, cover up an inch at the other end with a bit of deep blue glass or gelatine and leave the central inch uncovered. Fix this paper to a clean window-pane facing north. Now set up the camera so that the axis of the lens is perpendicular to the plane of the wall in which the window is situated. Let the lens have its largest stop or largest aperture in use. Focus for the central slit, using a focusing-magnifier for the purpose, and examine the red and blue portions of the slit. If the lens is achromatic, the red and blue parts of the slit should be equally sharply defined. If an uncorrected or "spectacle" lens be used, and the red part be put into sharp focus, it will be found that the camera has to be racked inwards to get the blue part in sharp focus. As it is the blue end of the spectrum that does the chief part of our photographic work, we find that when an uncorrected lens is in use and we adjust the focus for a sharp visual image, the negative is not so sharp as the ground-glass picture. Hence, it is necessary when

using these lenses, first to focus for a sharp visual image and then rack the lens inwards a distance about  $\frac{1}{4}$  the focal length of the lens, if a sharp negative is required.

*Astigmatism.*—On a piece of white card draw two or three sharply defined ink lines an inch apart and six inches long. Then draw a similar set crossing the first at right angles. Now set up this card on a vertical wall and point the axis of the lens perpendicular to the wall, and arrange matters so that the image of the card falls towards one corner of the focusing-screen. Then with open aperture and focusing-magnifier focus one set of parallel lines as sharply as possible. If the lens suffers from astigmatism, it will not be possible to get both sets of lines quite sharp at the same time, though either set can be sharply focused in turn. If the lens is free from astigmatism it may be called stigmatic, orthostigmatic, anastigmatic, holostigmatic, etc.

*Curvature of the Field.*—Curvature of the field of a lens means that objects lying in one plane perpendicular to the axis of the lens are not brought to a focus in one plane. To test a lens for this, we fix up flat against a vertical wall a large sheet of newspaper, and arrange for the axis of the lens to be perpendicular to the wall and the lens pointing towards the centre of the newspaper. Using the lens at open aperture, we first focus for the centre of the ground glass and then examine the corners of the focusing-screen (using a focusing-magnifier). If the lens has a "flat field," then all parts of the ground glass should be equally sharply defined; but if it has a curved "field," then we shall have to rack in or out to get the various parts equally sharply defined. Usually we shall find that when we have got sharp definition in the centre of the ground glass, we shall have to approximate the ground glass to the lens to get the corners quite sharp, but with some

lenses we may have to increase the distance between lens and ground glass. Curvature of the field is by no means always a practical defect. Indeed, in many cases of landscape work it becomes a very useful quality. This is also the case with many architectural pictures. Practically it amounts to this: to get our foreground subject in equally sharp focus with open aperture, the subject-matter must not be all in one plane, but take the general form of a large shallow saucer with the concave side towards us.

It is not, however, generally desirable to push matters to their theoretical limit in the way here indicated, but with modern flat field anastigmats this point becomes one of considerable importance at times.

*Distortion.*—Distortion, when applied to lenses, means that the lens does not render straight lines in the original as straight lines in the negative. This defect is more readily seen when the straight lines in the original fall near the margins of the plate. Hence, when testing for this defect we use as our copy a map or plan, drawing sheet or printed matter, such as newspaper, which has a couple of parallel straight lines at such a distance apart that we can arrange for them to come fairly close to the margins of the focusing-screen. The lines separating the columns of a newspaper form a convenient test object. This should be fixed up flat against a vertical wall and the axis of the lens set perpendicular to the wall. The ground glass also must be accurately vertical, *i.e.*, parallel to the wall. Practically all single lenses show more or less distortion. The shorter the focal length (other things being equal) the more the fault is likely to be noticed. If the stop is in front of the lens, a rectangular original is bellied out at the sides to a barrel shape, but if the stop is between the lens and the plate the rectangle will have the middle of the sides drawn inwards, something like the margins of a square pincushion. Hence if two similar lenses of equal focal length be used with a stop between, the distortion of one is corrected by the other. Hence the idea of the rectilinear and symmetrical doublets

now in common use. Except for maps or architecture studies, the distortion effect is practically negligible when the focal length is not less than one and a half times the long side of the plate.

*Flare.*—Flare is the result of a lens transmitting some light which is not brought to a focus on the ground glass to form the image of the object selected. The flare may be scattered all over the plate and produce a kind of general haze, or it may be visible as a more or less sharply defined disk or circle of light, or brought to a comparatively small patch or "flare spot." To test for flare, direct the camera and lens towards some dark object (tree, building, etc.), and at the same time arrange that some strong light or bright patch of sky or the sun is just over the dark object. Focus for the dark object and then move the camera about to see if any light patch is visible. If this be observed, then remove the back of the camera, and with a small piece of ground glass, moved towards and away from the lens, find where this bright cone comes to a point. Flare can often be best seen by focusing the opposite wall of a room at night, and putting a lamp on a table in front of the dark background. It is commonly supposed that single or "landscape" lenses have no flare; but as a matter of fact, every lens suffers more or less from flare. In a carefully made lens, it is negligible under all ordinary conditions.

*Spherical Aberration.*—Spherical aberration of a lens means that the outer portion of a lens does not bring the rays of light to the same focal point on the inner portion of the lens. To test a lens for this, first cut out of black paper a circular piece which just fits the inside of the lens tube. Then cut out of the centre a circular portion, and with a drop of water stick this on to the front of the glass so that light can only pass through the outer zone. Focus some small type very accurately in the centre of the ground glass. Then remove the central paper disc and replace it with the outer ring of the paper, leaving the central part, now clear. If the definition is equally good, as be-

fore, the lens is probably free from this defect. If, however, we find that spherical aberration exists—in other words, we find that the inner and outer parts of the lens do not bring their respective images to the same place—the result is that when both inner and outer parts are used together there is a sort of circular blur around each point. (For further details see our special number on Photographic Optics.)

There are, however, certain appearances at once visible which may here receive a word of explanation.

(1) *Color*.—It has long been known that many forms of glass undergo changes of color on exposure to light. Some kinds turn slightly green, others yellow. It is, therefore, desirable to keep one's lenses covered up as much as possible. The color of a lens may be seen by laying it on a sheet of quite wide note-paper. Of course glass that has turned pale yellow or green will not be quite so rapid as it was before it became colored.

(2) *Bubbles*.—The inexperienced photographer is apt to regard one or two tiny bubbles in the glass as serious defects. As a matter of fact, their effect is practically negligible and may be disregarded. The peculiar difficulties in the manufacture of many of the newer forms of glass now used in optical work seems to favor the formation of these air-bubbles. But if the lens bears the name of a firm of repute, the purchaser may rest assured that these bubbles may be disregarded in practice.

*Striæ*.—Striæ, or line-like markings, unless of a very conspicuous nature, may also be disregarded in a lens by any good maker.—*The Practical Photographer Annual for 1905*.

#### FIXING-BATHS ACIDIFIED WITH BORIC ACID

R. Namias states that if boric acid is added to a fixing-bath till saturated, any possible troubles due to the introduction of small traces of developer are avoided; it is also much more effective than sulphite. A thirty per cent solution of hypo saturated with boric acid shows no decomposition,

even after some weeks. With regard to the action of boric acid on hypo, Valenta has proved that the hypo is decomposed, but much more slowly than with a stronger acid.

#### FIXING IN DAYLIGHT

Luppo-Cramer states that plates may be fixed in not too bright daylight without any harm, but that in strong daylight or sunlight reduction of the silver takes place. He ascribes this to a sensitizing action of the hypo. The slower the plate fixes, the more the fog.

#### HYPO-ELIMINATORS

(1) *Dilute Iodine Solution*.—This instantaneously changes the hyposulphite into a quite innocuous compound, but it also has a tendency to form iodide of silver—i.e., bleach the negative.

(2) *Dilute Bromide Solution*.—This also rapidly oxidizes the hyposulphite, but likewise acts upon the silver image.

(3) *Hypochlorites*.—The alkaline hypochlorites act readily on sodium hyposulphite, but if used at all concentrated they also act on the silver image.

(4) *Sodium Peroxide*.—This oxidizes the hypo only slowly if diluted, and if concentrated attacks the gelatine sufficiently to disintegrate the image.

(5) *Hydrogen Peroxide*.—This is an excellent hypo-eliminator, and has no bad action on either the image or the gelatine.

(6) *Chromic Acid and Potassium Bichromate*.—These, with the addition of sulphuric acid, oxidize hypo very readily, but also attack the silver image. Without the acid they are of no practical value, as the action is very slow.

(7) *Potassium Permanganate*.—This oxidizes and destroys hypo instantaneously, but exercises a very manifest action on the silver image.

(8) *Potassium Percarbonate*.—This acts energetically on hypo, but its action takes place only during the solution of the solid percarbonate in water.

(9) *Ammonium persulphate*.—This, mixed with an alkali, is an excellent eliminator of hypo, and is regarded as the best of those considered.

# The Filter

## TAKEN BY THE LORD

The Minister's Wife.—“The new cook left this morning, the one you said the Lord must have sent.”

The Minister.—“Well, my dear, the Lord giveth and the Lord taketh away. Blessed be the name of the Lord!”—*Puck*.

## NOT THERE

“Judge,” said Mrs. Stoven to the Magistrate, who had recently come to board with her, “I’m particularly anxious to have you try this chicken soup.”

“I have tried it,” replied the Magistrate, “and my decision is that the chicken has proven an alibi.”

## NOT TRUE TO WOMAN’S ART

Mark Twain, while visiting a friend’s house, was asked his opinion of a new marble bust representing a young woman coiling her hair.

“Very beautiful,” said the humorist, “only it is n’t true to life.”

“Why not?” asked the owner.

“Has n’t her mouth full of hairpins,” said Mark.

## A NEGATIVE

Reporter.—“Where shall I put this article about a police raid on a photograph gallery?”

Editor.—“Put it under the head ‘Arrested Development.’”—*The Baltimore American*.

## NOT FORMALLY INTRODUCED

Uncle Nehemiah, the proprietor of a ramshackle little hotel in Mobile, was aghast at finding a newly arrived guest with his arm around his daughter’s waist.

“Mandy, tell that niggah to take his ahm ’way from ’round yo’ wais’,” he indignantly commanded.

“Tell him yo’self,” said Amanda. “He’s a puffed stranger to me.”—*Lippincott’s Magazine*.

## ONLY ONCE

The stranger strolled through the village streets until he arrived at the cemetery, says the old story. The grave-digger was hard at work excavating a grave. “Do people die often hereabouts?” asked the stranger. “None of ’em ever died more’n once since my time,” answered the grave-digger, wiping the sweat from his forehead with the back of his hand.—*New York Sun*.

## NOT COMPOSING NOW

A few years ago, in Cincinnati, a musical was given in honor of James Lane Allen, the prominent novelist. A wealthy society woman of that town, somewhat limited in her knowledge of music, but anxious to pose as a patroness of music and art, rushed up to Mr. Allen and effusively exclaimed:

“O Mr. Allen, are you fond of Bach? Is Bach still composing?”

“No, madam,” gravely replied the writer, “Bach is now decomposing.”—*K. E. Marshall, in Lippincott’s*.

## A GERMAN, ADDRESSING HIS DOG, SAID

“You vos only a dog, but I vish I vas you. Ven you go mit the bed in you shust durn round dree times und lay down. Ven I go mit the bed in I haf to lock up the blace und vind de clock und put the cat oud und undress myself und my vife vakes up and scolds me. Den de baby cries und I haf to valk him up und down; den maype ven I shust go to sleep it’s time to get up again. Ven you get up you shust scratch yourself a couple of times und stretch, und you vas up. I haf to quick lite the fire, und put the kettle on, scrap mit my vife already und maype get some breakfast. You play all tay und haf blenty of fun. I haf to vork all tay and haf blenty of drouble. Ven you die you vos dead; ven I die I haf to go to hell yet.”

## NOTES AND NEWS

### ITINERARY OF THE KODAK EXHIBITION

For the benefit of our readers who desire to attend the Kodak Exhibition mentioned on page 310 of this issue, as well as in the "Notes and News" of our October issue, we publish below the complete itinerary. Full particulars and admission-tickets may be obtained of Kodak agencies in the various cities named, and no photographic worker who aspires to realize the highest possibilities of his camera should fail to view the picture-show and hear the lectures. The itinerary is as follows: Philadelphia, October 29-November 3; New York City, November 5-17; Scranton, November 19-24; Pittsburgh, November 26-December 1; Columbus, December 3-8; Indianapolis, December 10-15; St. Louis, December 31-January 12; St. Joseph, January 14-19; Kansas City, January 21-26; Omaha, January 28-February 2; St. Paul, February 4-9; Minneapolis, February 11-16; Milwaukee, February 18-23; Chicago, February 25-28 and March 4-7; Grand Rapids, March 11-16; Toledo, March 19-23; Detroit, March 25-30; Toronto, April 2-6; Montreal, April 8-13; Buffalo, April 16-20.

### LIST OF THE SALON HONORS, P. A. OF A. CONVENTION, NIAGARA FALLS

F. R. Barrows, Boston, Mass.; W. N. Brenner, Cincinnati, O.; E. B. Core, New York, N. Y.; Louis Fabyan Bachrach, Worcester, Mass.; J. H. Field, Berlin, Wis.; Elias Golden-sky, Philadelphia, Penn.; George G. Halloway, Terre Haute, Ind.; Alfred Holden, Philadelphia, Penn.; F. W. Hornbaker, Scranton, Penn.; Dudley Hoyt, Rochester, N. Y.; Miss Belle Johnson, Monroe City, Mo.; T. Kajiwaru, St. Louis, Mo.; John Kennedy, Toronto, Canada; Chas. L. Lewis, Toledo, O.; S. F. Lifshy, Brooklyn, N. Y.; W. S. Lively, McMinnville, Tenn.; J. E. Mock, Rochester, N. Y.; Orr-Kiefer Co., Columbus, O.; Perry & Brecken, Allegheny, Penn.; James W. Porter, Youngstown, O.; George Rogers, Detroit, Mich.; Julius Strauss, St. Louis, Mo.; J. Thibault, Fall River, Mass.; George E. Tingley, Mystic, Conn.; W. K. Van DeGrift, Toledo, O.

### EXHIBIT AT THE WORCESTER ART MUSEUM

THE Third Annual Exhibition of Photographs at the Worcester Art Museum, Worcester, Mass., opened Friday evening, October 10, with the usual reception, a social function much enjoyed by the many people fortunate enough to be invited. The collection, consisting of 355 prints, was hung in five sections, the work of each contributor being displayed as an individual exhibit. First, there was the work of local men and women; second, the work done by people outside of Worcester, filling the West

Gallery. In the East Gallery were the loaned pictures, comprising a group of American musicians by professional workers; ten large prints of North American Indians, by E. S. Curtis of Seattle; and a series of photogravures of Hamburg men and women of the 20th century, by Rudolph Duhrkoop, who was delegated by the German government to make a report on similar work made in the United States.

The jury of admission examined the work submitted with much care and made a most judicious selection, with the result that the present exhibition was a much more important one than any held in previous years, the artistic character of the work, too, being eminently higher. Considering only the work in the East Gallery, which was practically by amateurs, one was impressed by the artistic feeling shown in many of the prints. In seeking to avoid, however, a tendency towards hardness, caused by a sharply-focused and crisply-developed plate, the worker gave free rein to over-exposure and under-development; but, instead of the atmospheric effect hoped for, he obtained only a dim, formless mass, with no illusion of distance. To be successful, a landscape must have atmospheric perspective, an illusion of distance; the foreground, middle distance and extreme background must each be treated differently. There was a great lack of variety in the landscape-studies, whether a path in the woods, a meadow with trees or a brook, still water with reflections, or whatever the *motif*. Many of them seemed very pretty, but few had the quality of excellence in composition or in light and shade, so to leave a lasting impression on the mind. "A Winter Morning," by George Buttler, is a pleasing portrayal of an apple-tree in a snow-field with a reflection on the snow. A ragged, bending pine-tree, overhanging a little stream, by F. H. Pratt, suggested a Japanese print. The best landscape of all in the room was by Lee Russell, "Brook and Mill Pond—Winter." The conception and treatment were broad, the subject interesting and unusual, and well composed. The picture of "Niagara Falls" was necessarily conventional in subject, but George T. Power has made a most successful presentation. The "Winding Brook," by C. F. Clarke, is also a good picture, and one longed for a copy to add to one's art collection. Of the figure-pieces the group by Louise Upton attracted attention because of the delicacy of treatment and the artistic skill displayed in the composition of line, as well as light and shade. J. C. Lyford also had a group of strong work, the subjects not being, however, specially interesting from an impersonal point of view. Jane Dudley had an attractive picture of a child, while F. Holland Day's only contribution, "Mother and Child," was very delicate and soft in tone. There was also a very superior display of flower-studies. Some Iris

blossoms by Dwight A. Davis, and gentian and mountain laurel by E. B. Tucker, were uncommonly successful. William H. Zerbe's landscapes and the genre studies of Louis Fleckenstein charmed by their sterling artistic qualities.

Of the loaned photographs, the portrait of Mrs. H. H. A. Beach, by Charles W. Hearn, combined all the qualities which a good portrait should have. The composition was unusual, the likeness excellent, and there was vivacity and charm in the expression. One admired the picture whether one knew the lady or not, and if one knew her, the picture simply gained in interest. The dignity and strength of the portraits by J. H. Garo were the subject of general comment, the sterling qualities of his work being obviously beyond the skill of the average worker. The same is true, in a great measure, of the other portraits of this collection of American musicians, all of which were reproduced on an imposing scale in the PHOTO-ERA of May, 1905, and attracted universal attention. The ten prints, illustrating the life of the American Indian, by E. S. Curtis, were much admired, this being the first time the people of Worcester had an opportunity to make the acquaintance of this artist's significant work. The portraits by Duchkoop were very strong and, as a whole, quite beyond criticism, although they clearly impressed one as the work of a regular professional photographer. Let us hope, however, that in time there may be added to such work a touch of art, not yet attained, and which will lift such pictures to a still higher plane.

This extremely interesting exhibition, made possible only through the courtesy and liberality of the Director of the Worcester Art Museum, closes November 18, and will have lasted one month.

## THE AMERICAN SHADING-MACHINE

ONE of the most interesting, useful and valuable parts of the equipment of an up-to-date photo-engraving plant is the American Shading-Machine. It is a valuable accessory for designers, publishers and even photographers, since by saving a vast amount of tedious hand labor it brings the artist into closer sympathy with the spirit of his work. It will reproduce in all the photo-processes, and print clear and sharp with or without reduction. It can be used in connection with pen-and-ink sketches, wash-drawings and crayon work, as well as with photographs. The principle involved is a transparent film, flexible, smooth on one side and with engraved lines — stipple, grained or other suitable textures in relief — on the other side, which is the printing-side. The film being transparent, the drawing is constantly in view and the tracing-progress of the artist can be seen through the film. Photo-engravers make

their drawings on a perfectly flat and even drawing-board or on card-stock. Artists who desire to use the machine and are not experienced in the use of coated boards can substitute a bristol board or a very smooth drawing-paper. The scratch-board, however, is by far the best, as it has a thick coating which allows repeated erasures when necessary. Though it is several times more expensive, it is the most inexpensive in the end. When making drawings, they should be from one-third to one-half larger than the cut that is to be made. The drawing is made first on ordinary paper, then a careful tracing of it on tracing-paper, which is later transferred to the scratch-board, by placing a blue or black underlay paper between the tracing-paper and the scratch-board. Then take a tracing-point and follow the drawing. When the tracing is completed, make your guide-lines for the lettering and other changes with a hard pencil and your lettering with India ink. When the ink is dry, lay the drawing on the drawing-board of the machine and select your film. When the film is properly adjusted, the process of reproduction begins. When all the shading desired is made, allow the shading to dry. One can stop out the high lights or places, where there is to be no shading, with Chinese white or gum arabic. The machine is used very much by photo-engravers and newspapers to make up their color-blocks, and it relates to photo-engraving and printing-processes of almost every description. Its object is to provide a new and improved half-tone negative, which permits the strengthening of the high-lights to a final point of high quality. In the half-tone negative the same texture pervades all parts, and in order to give different texture to the different parts, to remove the flatness and give life and strength to the finished result, it has heretofore been the practice to engrave by hand or rule by machine, line by line, and dot by dot, into the etched plate. The American Shading-Machine does away with this hand-work, which is slow and expensive. No photo-engraver who is progressive and up-to-date, and who studies economy in the processes of his trade, can afford to be without this valuable machine. The cost is only a trifle, compared with the great saving it effects, and full particulars can be had upon application to The American Shading-Machine Co., 164 Rano St., Buffalo, N. Y.

## THE BRITISH JOURNAL ALMANAC

H. GREENWOOD & Co., 24 Wellington St., Strand, London, announces that the "British Journal Almanac" for 1907, edited by George E. Brown, F. I. C., will be ready about December 1. The almanac will be arranged on the lines of the 1906 edition and will contain the latest information on all branches of photography. A special feature of the volume will be an editorial article on "Three-Color Photographic

## NOTES AND NEWS

Printing Processes." This article will deal with the various methods of preparing paper prints in natural colors, now so prominently before the photographic public. It comprises instructions on the Pinatype Process, the Sanger-Shepherd Process, the Imbibition Process, the use of the Rotary Carbon Stripping Films, the Double Transfer Process of the Autotype Co., the Gum-Bichromate and Selle Processes and the latest developments of the Bleach-out Direct Process. There will also be many other contributions, by leading English writers.

### A SAFE AND EFFECTIVE FLASH-LAMP

The Crown Flash Lamp is a good lamp; in fact, many consider it the best flash-lamp of this size made.

It is arranged so that the magnesium powder is stored in the body of the lamp and blown up through the centre of the flame. The powder is thus thoroughly consumed and a large and powerful light is produced.

In order to fill the magazine with magnesium a removable top is provided. Long or short flashes may be made with it. Only *pure* magnesium may be used.

The Crown is safe, economical and reliable. It is the most powerful lamp of its size on the market. It is well made and finished in polished nickel. The price is only \$1.50, and compared with any other similar lamp every one will agree that it is worth more. It is made by the Folmer & Schwing Co., Rochester, N. Y., and sold by almost every dealer.

### A SIMPLE AND CONVENIENT THING FOR LANTERN-SLIDE MAKERS

The fall and winter months are the months when amateurs begin to think about their lantern-slide work. Of all the many arrangements which have ever been offered for making lantern-slides by contact, none of them present the many points of utility and convenience that the F. & S. Lantern Slide Contact Printing Frame does.

It is constructed so that the negative may be shifted to any part of it, brought into contact with the lantern-slide plate, and held securely by the back panel and spring.

The centre frame may be removed and the lantern-slide plate placed in position and secured with centre panel and spring, ready for exposure. These frames are substantially constructed and finished, made of straight-grained cherry with lock-jointed corners, in sizes 4 x 5 and 5 x 7 inches.

The 4 x 5 measures on the outside 8 x 8 inches and is 1½ inches deep. The 5 x 7 measures 12 x 12 inches, with a depth of 1½ inches. The price of the 4 x 5 is \$3.00 and the 5 x 7 is \$4.50.

This frame is made by the Folmer & Schwing Company, Rochester, N. Y., and is undoubtedly on sale with all dealers.

### PENNSYLVANIA PHOTOGRAPHIC CONVENTION

THE Executive Board of the Photographers' Association of Pennsylvania met at the Park Hotel, Williamsport, October 2. The members present were, H. H. Detrich, Altoona, president; W. E. Perry, Allegheny, first vice-president; Ralph Bickel, Williamsport, second vice-president; W. I. Goldman, Reading, treasurer, E. E. Seavy, New Castle, secretary. They have secured the hall at the Park Hotel for holding the next convention. The dates selected are April 23, 24 and 25, 1907. The president appointed the following committees: on speakers, Detrich; on collecting pictures, Perry; on floor-space, Bickel; badges and medals, Goldman; catalogue, Seavy. A list of the prizes offered, together with a full statement of the conditions governing entries to the various competitions, may be had upon application to the secretary, E. E. Seavy, New Castle, Penn.

### MAJOR MOREHOUSE IN THE INDIAN COUNTRY

WE understand that Major Lee Morehouse, of Lewiston, Idaho, the noted writer of Indian history and photographer, is now in the Nez Percés country in Idaho securing photographs of the Indians during their annual celebration. This means a notable addition to Major Morehouse's already large collection of negatives, numbering, it is said, more than five thousand. Although maintaining his headquarters at Pendleton, Ore., Major Morehouse spends a large portion of his time on the Indian reservation in the Spokane country. His work, both photographic and literary, shows the red man's progress during the last fifty years.

### PHOTO-SECESSION EXHIBITION

AN exhibition of photographs by members of the Photo-Secession will be held at the Little Galleries of the Photo-Secession, 291 Fifth Ave., between Thirtieth and Thirty-first Sts., New York, opening on November 10 and closing December 30. The galleries are open from 10 A.M. till 6 P.M. daily, Sundays excepted.

### PHOTOGRAPHERS' ASSOCIATION OF WISCONSIN

THE Executive Committee of the Photographers' Association of Wisconsin held its annual meeting at the Republican Hotel, Milwaukee, Wis., Oct. 4, 1906, for the purpose of arranging for the Eleventh Annual Convention, to be held in Milwaukee in 1907.

All of the officers were present, viz.: B. J. Brown, president; W. A. Pryor, first vice-president; W. J. Hillman, second vice-president; A. A. Bish, treasurer; J. M. Bandtel, secretary.

The Republican Hotel was selected as the

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official headquarters for the 1907 convention, and the Masonic Temple assembly and banquet halls as the place for meetings and exhibits.

The convention dates were fixed for Apr. 23, 24 and 25, 1907.

Full particulars of the important features may be had of the secretary.

### RECOGNITION OF DISEASE-GERMS BY MEANS OF THE PHOTOGRAPHIC PLATE

THE difficulty of distinguishing the bacillus of typhoid fever from a comparatively harmless relative frequently found in the normal human intestine is well known by students of medical science. Dr. Walter T. Stevenson, an eminent English physician, has recently discovered that the difference may be detected by the use of the photographic plate. Dr. Stevenson finds that if these germs are grown in broth for twenty-four hours, and a few drops of the resulting culture, as it is called, are allowed to dry upon the film of a photographic plate, the typhoid bacillus will, upon development of the plate, be seen to have produced scarcely any reduction of the silver, while the bacillus coli-communis will have caused quite a dense deposit. A summary of Dr. Stevenson's observations from *Camera Craft* is as follows:

"(a) The discriminative action is the same with some variations in degrees of distinctness, when typhoid and coli cultures of the same age are compared at very different periods after inoculation. Thus cultures of these two organisms in broth compared after four hours' growth and after thirty-three days react as above.

"(b) The activity of each increases with time up to a certain age which has not been accurately ascertained. This activity possibly varies with the physical conditions attending culture, but may be taken as increasing from shortly after inoculation to four days of growth.

"(c) A coli culture of twenty-four hours' age when compared with a typhoid culture of any age (tested up to thirty-three days) gives the more marked reducing-effect.

"(d) After a few hours' growth the broths may be boiled and thus sterilized and the differential effect upon sensitive surface persists.

"(e) This discriminative reaction has been obtained with four cultures of coli from different sources and with five typhoid cultures from different sources.

"(f) It will be found that if the sensitive plate is wetted with tap-water and also with sterile broth, and simultaneously applications of the cultures are made — four separate areas being thus prepared for comparison — the typhoid and sterile broth do not differ markedly in their actions upon the silver bromide, whereas the effect of the tap-water has been intermediate between that of the coli and the typhoid. It

is known that water is to some extent a sensitizer.

"(g) The time of exposure of the plate to the application of the cultures has varied between ten and ninety minutes, and the discriminative action of twenty-four hours' cultures found to be best marked with an exposure of forty-five minutes. But from at least ten minutes' exposure upwards the difference is obtained with any broth in which there is a visible growth.

"(h) While in some of the earliest of these observations, and before I had gained experience as to the best methods to employ, a few cases occurred in which the distinctive difference was not well marked, in all my recent observations, twenty-four in number, I have unfailingly obtained the differential effect.

"(i) Finally, I have observed that if pools of well-grown coli and typhoid broth cultures are poured on a photographic plate and exposed to light, a reduction of silver is seen in a few minutes without development. After about thirty minutes the deposit due to the typhoid broth is distinctly darker than that due to the coli broth. If the pools be now poured off the sensitive plate, the difference reaches its maximum, but as the gelatine dries the distinction is almost lost. Tap-water has no visible effect except the swelling of the wetted gelatine of the plate."

### THE HUTCHINSON STUDIO

ON the sixth floor of the Fine Arts Building in Chicago, Mr. Eugene R. Hutchinson has a studio where he makes photographic portraits. Not that his "home portraiture" has been given up, but for the convenience of those wishing sittings elsewhere this studio has been opened.

### THE TESSAR LENS FOR 3A KODAKS

THE Tessar lens made by Carl Zeiss at Jena, having been very popular with Kodak users, is now offered in a new tube mount from which the cells can be readily removed and screwed into any 4 x 5 shutter. The Tessar is particularly suitable for the 3A F. P. K., and with the compound shutter, the speed of which varies from 1 to  $\frac{1}{320}$  of a second, makes an excellent outfit. This lens has a speed of F. 6.3, and a unique feature is the polished black finish of the mount.

On application to E. B. Meyrowitz, 104 East 23d St., New York City, a most interesting catalogue of Carl Zeiss lenses will be sent.

### THE ELMENDORF TRAVEL TALKS

DWIGHT ELMENDORF, who has during the last eight years made himself exceedingly popular in his travel talks in New York, Philadelphia, Washington and the Western cities, is to enter the Boston lecture-field at Tremont Temple on five successive Saturday afternoons, be-



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ginning November 17. It is said that the peculiar charm of Mr. Elmendorf's lectures is the simplicity and directness which characterize them. His pictures are unique, as they are taken, colored and prepared solely by the lecturer, so that they are the product of a single mind, a single purpose, and their effect is correspondingly intensified.

### MEETING OF THE PROFESSIONAL PHOTOGRAPHERS' SOCIETY OF NEW YORK

THE Metropolitan Section of the Professional Photographers' Society of New York, Mr. E. B. Core, president, held its first meeting since summer in the parlors of the Milton Waide Metropolitan School of Photography, Inc., 32 Union Sq., New York City, Tuesday evening, October 9. As is customary, the meeting was made up of business discussions interspersed with social "get togetherness." The experiences of Messrs. McDonald, Bryon and Falk during their summer vacations in Europe furnished agreeable diversion, and all together the meeting was one of the Section's best.

### THE WORK OF MRS. CALEB KEENE

THE ways in which the advantages of photography are being utilized seem to be without limit. In the realm of education photography is an important factor, but here its value has only begun to be appreciated, and it will not be long ere this most wonderful of all sciences will take an honored place in the daily curriculum of the public schools. Among numerous applications of photography to educational work is the introduction into public schools of photographic nature studies. Here the accurate, faithful products of the camera are gradually displacing the time-honored lithograph, which, though generally artistic in design, is not always a correct facsimile of the original, a defect easily remedied by photography. If, in addition to this important quality, the photograph be strikingly artistic and also possesses the element of cheapness of production, its preference to the lithograph will be easily understood. A worker who has gained renown in this valuable branch

of photography is Mrs. Caleb Keene, of Cape Town, South Africa. Her standing as a pictorialist of first rank was won by a series of brilliant successes, one of which, greatly applauded in England, is reproduced in these pages. This characteristic group, entitled "Cape Malay Laundry," was to have embellished our "Women's Number," but unfortunately it arrived too late.

We have before us a varied assortment of Mrs. Keene's Nature Studies, in the form of finely-executed half-tone impressions, measuring eight by ten inches, intended for use in schools and to materially enhance the study of natural history. The botanical and zoological subjects selected by Mrs. Keene for photographic illustration fully demonstrate her rare powers of discrimination, her strong artistic perception and technical ability, as well as her command over the resources of her art. It is quite obvious, too, that she performs her task *con amore*, and the extraordinary success marking her efforts in this important domain of science is proof of our contention that certain phases of photography belong emphatically to woman's sphere.

Though living in a community remote from centres of civilization, distant from sources of sympathetic encouragement and helpfulness, and laboring under difficulties not easily appreciated by workers in the United States, Mrs. Keene pursues her work with unflagging devotion and industry. She is publishing in England a serial work in folio form size, entitled "Keene's Nature Studies," which is devoted chiefly to flowers, fruits and seeds. The publication is artistic and attractive in design, while its numerous half-tone illustrations are remarkable for their high artistic and technical excellence. The lady is publishing a similar work pertaining to the flora and birds of Africa, as well as to types of people. That enterprises such as these possess great scientific and educational value is self-evident, and we are sure that our readers, one and all, will wish that so devoted and capable a worker as Mrs. Caleb Keene will, besides a moral satisfaction already hers, reap suitable financial reward for her patient and intelligent labors.

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## PHOTOGRAPHIC PROBLEMS WITH SOLUTIONS BY PRACTICAL MEN

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UNDER this heading we insert questions of a practical character relating to photography, preferably the technical side. For each suitable question which we publish, we offer twenty-five cents. We also give two dollars for every answer we print, our selection to be absolutely free of any prejudice. The answers to any problem should be in our hands within ten days after the same shall have appeared. The replies should deal concisely with the points at issue and not exceed three hundred words in length. In this connection we shall use only the initials of correspondents, whose identity will, on no account, be disclosed. Irrelevant or discursive answers will not be considered. (OVER)

## NOTES AND NEWS

### QUESTIONS

What is the best studio light, and why? — C. E. A.

How should a portrait-negative be retouched to preserve the likeness and character of the sitter?

### AN ANSWER TO THE QUESTION ON WORKING ARISTO PAPER

The question of W. F. N. might just as well be: "*Can the amateur photographer, etc.?*" To this query my answer would be: "As a general thing, No!" The reason is not far to seek. The professional does everything on a larger scale than the amateur, and more is the pity. In portraiture alone the professional has a vast advantage over the amateur, for he employs the ideal portrait-lens, which, on account of its bulk and weight, cannot well be fitted to the amateur's folding camera.

But I am wandering from my subject. The professional with his numerous daily sittings is obliged to develop a large number of plates, and, to save time, handles as many as six 5 x 7 plates at a time, often more than this number, all in one large tray. This requires a large volume of developer, which maintains a uniform action much more easily than does a smaller quantity, say, three ounces of solution in a 5 x 7 tray doing duty for one plate of that size. If a sediment forms in the diminutive tray, or if by accident one drop of hypo. falls in, it vitiates the developer almost immediately, and the trouble begins. In the case of the professional's tray, usually one of generous dimensions, a chemical change in the developer from the above-named causes does not occur. The reason for this is obvious.

Now this is true also in the handling of gelatine prints, for example, and, more especially, of aristo-prints, with their delicate collodion surface. In every stage of the manipulation the professional — in this case the printer usually has charge of this department — operates with large, wooden, asphalt-coated trays, often forty inches long and wide in proportion. This enables him to handle a large batch of prints in one single operation with astonishing ease, permitting them to float about free from the bottom of the tray and free from each other, without interference likely to damage their delicate surface.

Even the preliminary rinsing is deemed important; but the toning-process, which follows, requires more care. If during this operation it is found necessary to strengthen the bath by the addition of gold-solution, the matter is simple enough, for by several swashes of the hand the professional quickly effects a thorough mixing. When chloro-platinite of potassium is the dominant factor, still more experience is required, and additions of this ingredient to the toning-solution, when deemed necessary, are made with ease by the experienced hand. If the professional is desirous of producing an aristo-print of superior quality, he realizes that the utmost care must be exercised in every stage of its production until it is safely affixed to the mount. He will, therefore, be careful not to remove the print prematurely from the toning-bath, for otherwise the necessary amount of gold will not be deposited and the fixing-bath will not be able to impart sufficient "body" to the picture. If, on the other hand, the prints are over-toned, they will have a feeble and washed-out appearance when taken from the fixing-solution.

When it comes to the fixing of the prints, experience alone can dictate the length of time here required. The professional printer is careful to make sufficient allowance in the printing of the impressions for loss of strength and color in the fixing-bath. Of course it is easier to obtain the requisite depth of the print when several dozen are pulled off from one single negative. To allow for the possible loss of one print or two, the professional sometimes prints a few extra ones. Another item of importance, which the professional takes care to note, is the temperature of the bath. This should be kept as near 70° as possible, both in winter and summer.

The professional, like the amateur, has his troubles. In the case of aristo-prints he often has to contend with blisters or bubbles, fastidiously referred to as "air-bells." When once the cause of this difficulty becomes known, the professional succeeds in removing it. Certain reddish marks on the pictures, the knowing printer correctly attributes to touching the surface of the prints with perspiring fingers, before toning, and is more careful the next time.

I find myself giving a series of "don'ts," which, while helpful to the amateur, will unduly prolong this communication. I will close by saying that, if the amateur will provide himself with, say, four good-sized trays, taking care to use each for a specific purpose and never mistake the toning for the fixing tray, he will have made a good start. If he have ordinary intelligence and knows the value of cleanliness in photographic manipulations, the amateur should find no difficulty in following the printed directions which accompany each package of aristo-platino paper. The manufacturers maintain in each large city of the United States, and also in Canada and New Mexico, at least one expert demonstrator, who will be glad to meet the amateur, as he does the professional, when the latter has struck a snag; and the good-natured agent does not rest till the technical difficulty has been located and eliminated.

Thus I do not hesitate to say that it is possible for the amateur to produce as excellent aristo-prints as does the first-class professional photographer.

F. E. F.

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# PHOTO-ERA

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## THE AMERICAN JOURNAL OF PHOTOGRAPHY

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NO. 6

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R. DUEHRKOOP  
A RECOLLECTION OF AN OLD CANVAS



# PHOTO - ERA

The American Journal of Photography

VOL. XVII

DECEMBER, 1906

No. 6

The cactus towers, straight and tall,  
Through fallow fields of chaparral;  
And here and there, in paths apart,  
A dusky peon guides his cart,  
And yokes of oxen journey slow  
In Mexico.

A land of lutes and witching tones,  
Of silver, onyx, opal stones;  
A lazy land, wherein all seems  
Enchanted into endless dreams —  
As in the ages long ago,  
In Mexico.

## GLIMPSES OF MEXICO

G. F. PAUL

IT is not the purpose of this article to show that Mexico is a land without a drawback either to the native or the visitor. The hotels are wonderfully inadequate, transportation doubtful and sanitation negative. As for the native, he starves, and feasts and prays for rain. The dusky peon, struggling along the highway with his market load, little thinks of the historic pageants that have swept along that same highway. For him the copper *centavo* is the medium of exchange, a gay *zarape* the apparel of a king, and a Sunday service, followed with a bull fight, temporary enfranchisement from a life of slavery. The road to the market is a long and stony one that wears big holes in his sandals and makes him glad for the rest that comes when, through the darkening night, a hospitable *hacienda* looms up before him.

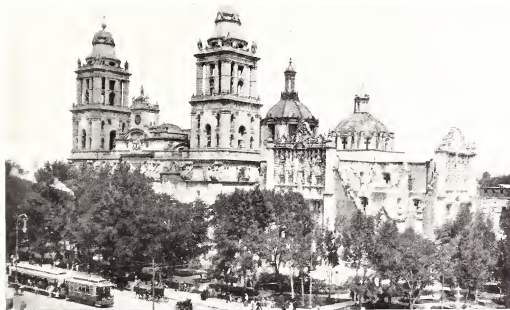
Viewed from a distance, the scene is vivid and striking—above, a strip of stars and a strip of black clouds. Now, of the crowd huddled under the long portals of the *hacienda*, all are not besotted fathers and bleary-eyed mothers. Pairs of young lovers sit billing and cooing. A match shows for an instant three dark faces held closely together around it, all eager to get a puff at their cigarettes. Then comes a great rustling and murmuring of innumerable leaves in the towering fig-trees, and clouds of dust sweep swirling down the road. More mysterious figures with packs on their backs trudge wearily up to the *hacienda's* portal, drop on the cobblestones and fall fast asleep. Then the wind



TYPE OF MEXICAN INDIAN GIRL

lulls; the chirp of a cricket and the croak of a frog tick off the still hours; the multitudinous leaves cease to quiver and tremble; the watch-dog slowly lets his head sink down upon his outstretched paws; and the vast *hacienda*, with its pauper and its prince, is at rest — rest where a capital has stood, rest where a nation lies buried.

Yes, but such a night scene is not readily painted or photographed. True, but in the morning an even more attractive scene will be awaiting in the inner courts of this vast building. Here flowers of rarest beauty run riot in broad *patios* whose thick-leaved trees are jubilant with gay songsters. High walls hide this inner home life of the Mexicans from casual visitors, so that its real beauties and comforts are but little known. Such cities as Puebla and Guadalajara will, however, show even the most unobservant stroller glimpses of these sunlit *patios* that light up the darker entrance-ways. And not far from such entrances may be found the scrofulous beggar with his rags, the wrinkled crone selling lottery tickets, the public letter-writer with pen and ink, the haughty *ranchero* in full *charro* costume, the black-eyed hawker with his long-drawn



HOTEL ITURBIDE, MEXICO CITY

THE CATHEDRAL, MEXICO CITY

PATIO, HOTEL ITURBIDE



PRIMITIVE IRRIGATION, NORIA — LAKE CHAPALA

*grito*, the devout matron with prayer-book and dark mantilla, the languid señorita with her smiles. Every hamlet has its church; every church has its history. In many a by-corner of this New Spain may be witnessed such morning scenes as characterized the life of the peasant architect Zeferino Gutierrez. The cathedral which he built rises high above the little city of San Miguel de Alende. Innate artistic ability coupled with a passionate and consecrated zeal has raised such grand memorials throughout Mexico. We can readily picture him as he comes from the dark door of his *adobe* hut out into the brightness of a Mexican morning. Smoothing the sand with his bare foot, he traces with a pointed stick the quaint designs and conceits that have appeared in dreams to his struggling mind. Then gathering his few tools, he hastens across the cool green of the plaza to the scene of his toil, where, silently and skilfully, he works and plans until the sun, sending long, level beams across the rough brown hills, tells that another day is done.

And this same sun, when viewed from some *Sacro Monte*, will be seen playing on red-tiled roofs and piercing thick olive-groves where white-walled churches are nestled. The laughing waters dancing down from the shoulders of giant hills catch the gleams and laugh with gladness. Returning home from their work, the bronzed peasants hear the evening bells through the clear air, and peace is theirs. Far, far above, dominating the green valleys and virgin forests, rising like a cloud of incense from the earth, spotless ambassador to heaven, towers the sky-pointing volcano, now silent and unchanging.

With such views, the camera expert or the man with the "white umbrella" will be exceedingly overworked, and stands in danger of dying a premature





A MEXICAN WATER-CARRIER  
OLD BRIDGE NEAR SAN ANGEL

"THE SIXTH AGE"  
A MEXICAN LANDSCAPE



BORDA GARDENS, CUENAVACA

IN THE INNER PATIO

WINDING STREET IN GUANAJUATO, BY C. B. WAITE

death in the heyday of his life. He will rise in the wee hours, swallow a roll and a gulp of coffee, then rush out frantically to see the sunrise, that he may later with pride point to a matchless view and tell of when

"Morn, in the white wake of the morning star,  
Came furrowing all the orient into gold."

Then he will hurry back to the hotel, pack his kit, and row far down the lake, where perfect models can be found at every step. Picturesque huts abound in such profusion that their images will be retained on his retina just as the penitentiary prisoners see stripes continually. And then, when the shadows tremble on the lake, the overflowing wealth of color, that floods mountain and cloud at the setting of the sun, is sure to hold him spellbound. Reflections multiply, colors blend, dashing madly at each other and dying in the effort. Startling blues and impossible yellows dissolve as quickly as they were formed, and leave the artist out in the middle of the lake, weary and supperless.

The keel of his boat grates on the pebbles. Exhausted in mind and body, he slinks off to his room. But even in its sanctity there is no rest, for from without there comes the tinkling of a mandolin and the thrumming of a guitar. And stepping to the wide window, he looks out beyond the vine-clad cottages to where the moon leads a fairy dance on the laughing waves. Above, every star of *Corona Australis* scintillates in its priceless baldric, while on the far horizon the Southern Cross, a welcome stranger, sparkles in the clear mountain air. And later, silence sleeps on the scarred mountains, the moonlight loses itself in the depths of the narrow *barrancas*, the city lies like frozen sculpture at his feet, and over all is that calm grandeur that no voice, however gifted, can describe; no brush, however magic, can portray.



SUNSET ON LAKE CHAPALA

## THE PRESENT STATUS OF COLOR PHOTOGRAPHY

E. J. WALL

**I** WISH that the task of trying to give a brief but coherent idea of the present status of color photography had fallen to some one's else lot, for it is not the first time I have spoken on it, and it is always as well that a subject should be viewed from different standpoints.

My task is rendered all the more difficult because the recent exhibition organized has practically taken the wind out of my sails. This was an excellent exposition of color-photography as now practised.

It is necessary to divide the subject into two main heads: first, the commercial application in the shape of photo-mechanical work, and, secondly, those processes which, requiring no mechanical power, may be used by any photographer, whether professional or amateur.

With regard to photo-mechanical processes, there is practically only one which is now of any importance, and that is the half-tone process. We are all of us more or less familiar with the present status of this craft, or, at any rate, with the results. It is true that there are still faults and the inks are not in every case ideal, and in some cases one feels that there is more fine etching than should be required. To enter at any length upon these points would entail your being wearied and my transgressing that rule which says that papers must be limited to half an hour. The subject of the inks in particular has been ably treated by Sir Wm. Abney, and the outcry is still for those with ideal absorptions. I believe I am correct in saying that if more attention was paid to the precipitation of suitable dyes of the so-called aniline class, suitable as regards fastness to light, transparency and correct color absorption, we might get further advances. A generally accepted opinion is that all the aniline dyes are fugitive, but this is not so by any means. Of course, the chief fault of the half-tone process is the irritative effect of the cross-line screens; collotype is a long way ahead in this respect, but it was proved quite ten years ago not to be a commercial three-color process, if regularity of results is to be kept in view.

I am not rash enough to say that we have reached finality in the photo-mechanical reproduction of subjects in natural colors, but if further advance is to be made, it can only be by the application of strict scientific facts and not of rule of thumb work.

Turning now to the second method, we must divide this into two classes — the direct and indirect processes. To the former belong practically only the Lippmann and the bleaching-out process.

Since Professor Lippmann, of Paris, gave, in 1891, details of his process of obtaining photographs in colors direct in the camera there has been no great advance; minor improvements there have been, but the very fact that it is necessary to use perfectly transparent and grainless emulsion must, so far as I can see, limit the speed of the plate, with the result of proportionately long exposures. The fact, too, that the resulting pictures are upon glass, and can only

be seen by reflection when viewed at a certain angle, must limit this process to the laboratory.

Last year Professor Lippmann announced that after exposure of a film of bichromated gelatine in the camera in such a manner as to obtain interferential effects he had been able to considerably intensify the colors by first treating the film with potassium iodide and then with silver nitrate. By this process silver iodide would be formed in the luminated hardened gelatine. The colors were not only more vivid when viewed in the ordinary way, but the complementary colors were vividly seen by transmitted light. Bichromated gelatine is excessively slow, and so far has not been satisfactorily orthochromatized, so that there is little hope with this. If the same principle could, however, be applied to the ordinary Lippmann emulsion plates, it might be valuable to obtain negatives in the complementary colors.

Another process which will give us colors direct is that known as the bleaching-out process. In this, as you probably all know, a mixture of fugitive dyes is coated on paper, and exposed under a colored original, and the dyes are bleached out by the colored light that they absorb.

Dr. Neuhauss, who has paid considerable attention to this subject, uses a mixture of methylene blue, auramine and erythrosine in a solution of gelatine, and increases the sensitiveness by the addition of chloral hydrate and caustic soda. Dr. Smith, of Zürich, who is placing a somewhat similar paper on the market, still adheres to the use of anethol, the camphor of aniseed oil, and advises the backing of the paper when the printing is half finished with a sheet of blotting-paper saturated with hydrogen peroxide and alcohol.

You will note that this is a printing-out process from a colored original, and so far exposures in the camera seem hopeless, for on Dr. Smith's authority it is possible to obtain a result in the camera with an exposure of something like six hours. Should it ever be possible to increase the sensitiveness of this product so that it became possible to obtain a colored result by any reasonable exposure in the camera, it would be very valuable, because with one such result the duplication or printing would be easy, as the colors obtained would in the same way reproduce themselves on a similar preparation, for red light bleaches out the yellow and blue, leaving red; blue bleaches out yellow and red; and yellow bleaches out the red and blue. Intermediate colors are, of course, formed by the partial bleaching of two colors.

There are many difficulties in the way to success, for the results depend upon the character of the light, sunlight not giving the same result as electric, and so on.

#### INDIRECT PROCESSES

Indirect methods of color photography are those in which three negatives of a subject are obtained through suitable red, green and violet filters, hence the name "three-color photography," which embraces a whole series of processes.

There are, however, two main divisions, the first comprising the additive or optical synthesis methods, in which an image is formed either by projection

with three-colored lights or the image is formed by reflection in an instrument such as the chromoscope, such as I have on the table here. In both cases the transparencies are projected with or viewed by light which is practically the same as the color-filter through which the negatives were taken.

While these methods are not such as appeal to every worker, because in the one case the triple lantern is a costly and cumbersome apparatus, and in the other because only one person can see the result at a time, in my opinion no results by any other methods can equal those obtained in this way.

Professor R. W. Wood, of Wisconsin, U. S. A., devised in 1899 a method of producing pictures in their natural colors by optical synthesis by means of three diffraction gratings ruled in different degrees of fineness on glass. Three constituent negatives are taken in the ordinary way through the usual red, green and violet filters, and from these transparencies are made by the usual photographic process. A sheet of glass is coated with bichromated gelatine, dried and exposed to the transparency taken through the red filter, the coarsest ruled diffraction grating being placed in between; the whole is then exposed to sunlight, using parallel rays as far as possible. On the same plate is placed the positive from the negative taken through the green filter, with a finer filter interposed and again exposed to sunlight, and the plate then developed with warm water. The third transparency, from the negative taken through the violet filter, is exposed, film side out, with a second bichromated gelatine plate, a still finer ruled grating being interposed, and then developed with warm water and dried. On bringing the two plates into accurate register and viewing them by transmitted light by means of an eye-piece, a picture in colors will be seen, the colors being formed by the decomposition of the light by those lines of the various diffraction gratings which were impressed on the bichromated gelatine, through the transparent parts of the positive used.

In 1904 Professor Wood improved his process and applied it to positives obtained by the Joly process — that is, positives obtained from the negatives taken through screens ruled with the three filters in closely contiguous lines. Gratings were ruled with three sets of lines in bands corresponding to the width of the red, green and blue lines of the Joly screen. The positives from the Joly negatives were flowed with a thin solution of gelatine sensitized with bichromate of potash and dried. The triple-ruled grating was then placed with its ruled surface in contact with the sensitive film, and exposed for a short time to light, and the plate then dipped in warm water and dried.

Quite recently Mr. H. E. Ives, the son of F. E. Ives, who has probably done as much as any one for photography in natural colors from a practical point of view, has so far improved this process that in my opinion it can now be considered practical. He points out that the disadvantages of using Professor Wood's latest method are that one has to use a special grating, that one is constricted to the use of Joly pictures, and, further, that the Joly rulings themselves act as gratings and give rise to false coloring due to the superposition of spectra.

I do not propose to enter into a detailed statement of all the arguments and



MYRA WIGGINS  
POLISHING BRASS



facts that he deduces, nor to detail his methods of his early work, but to try and give you a succinct account of the plan he has finally adopted. Negatives are taken in the usual way through the usual color-filters; from these negatives transparencies are made by contact. A diffraction-grating replica on glass having 3,600 lines to the inch is required, and some bichromated gelatine plates and a ruled screen, with at least 200 lines to the inch, and with the opaque lines twice the width of the transparent. One of the transparencies is then projected by means of a lens on to the bichromated gelatine plate, the diffraction grating being placed in contact with the film, and then over this the ruled screen. The exposure is made, and the second transparency placed in position; the diffraction grating is now turned through an angle of  $21\frac{1}{2}$  degrees, the ruled screen shifted so as to cover the exposed part of the film, and uncover a fresh strip; another exposure is made. The third transparency is then placed in position, the grating again shifted 21 degrees, the ruled screen again shifted to cover the two exposed lines, and the third exposure made. The plate is then washed in water to free it from the bichromate, and the operation is finished.

The shifting of the grating is to cause the blue, green and red to fall in their proper places: when the grating ruling is parallel to the slit, the blue falls on the plate; after a shift of  $21\frac{1}{2}$  degrees the green is on the plate; and with the second shift of 21 degrees, the red; for as a grating is rotated as regards the slit, the spectra close in towards the slit.

The resulting plate, because you cannot call it either a negative or positive simply has impressed on it the rulings of the grating at the above-mentioned angles, and only where the light passed through the transparency. When viewed in the hand the result is a colorless sheet of glass, but when illuminated by light from a slit and viewed by a lens or eye-piece the colors are at once seen in very great brilliancy.

In order to obtain a great amount of light, Mr. Ives uses four slits, and thus obtains the superposition of two first and two second order spectra. The lines are so fine as to be absolutely invisible to the naked eye. This method is to be adapted for lantern projection, and it is hoped to find means to take the pictures directly in the camera.

From a scientific point of view this process is of very great interest, but I very much doubt, and this is entirely a personal opinion, whether it can ever become a popular commercial process. Dismissing any inherent difficulties in the working, and there may be some, I do not think that the public is going to be satisfied with pictures on glass or those that require a special apparatus to see them; such could not be given by Edwin to Angelina, or at least it would be inconvenient for the latter to carry about an instrument as big or bigger than a stereoscope, in order that she might, when she thought fit, gaze on the features of her beloved.

The process is extremely ingenious, and every credit is due to the inventor, who obviously bids fair to become the distinguished son of a more distinguished father.



All other methods of obtaining photographs in natural colors are what are known as subtractive methods. That is to say, we start with a white screen or paper, and lay pigments thereon, and thus subtract something from the total white light.

Considering first those methods by means of which we can obtain transparencies that can be projected with any ordinary lantern: there are practically three principal processes, the Sanger-Shepherd, that of the Lumière N. A. Company, and Pinatype.

Taking these processes in order, I propose to briefly sketch the lines on which they proceed, and show you results by the same. I do not propose to enter into working details; those amongst you who dabble in color photography are as well acquainted with the same as I am. Others must judge for themselves of the value of each and all the processes, and they have a very ready means of obtaining instructions for the same. Personally, I do not believe that there is much difference in results by any of the positive processes provided the negatives are correct.

First of all we come to the Sanger-Shepherd process. In this a positive is made from the negative taken through the red filter on an ordinary black tone lantern plate; this is developed, fixed, thoroughly washed and the image converted by means of ferricyanide and an iron salt into a blue image. From the negative taken through the green screen an image is obtained on bichromated gelatine containing a little silver bromide, the support being celluloid, and printing being done through the celluloid; the image thus obtained is developed in warm water exactly as in the carbon process, then stained up with a red dye, and superimposed on the blue image, and the celluloid stripped. In the same way a positive is made from the negative taken through the blue screen, and stained up in yellow, and the whole cemented and bound together.

In the Lumière process as worked in England, precisely the same procedure is adopted, only the blue image is obtained by the same process as the other transparencies, and stained up with a blue aniline dye.

The Pinatype process differs from the other two, in that the dyes used will not stain hardened gelatine; that is to say, in the last two processes the original negatives are used for printing, a relief in hardened gelatine is thus obtained, and this relief is stained up; whereas in the Pinatype process transparencies have to be made in the usual way, and from these the colored transparencies are obtained. A sheet of glass coated with bichromated gelatine is exposed under the transparency from the negative taken through the green filter, and, after removal of the bichromate with a bisulphite bath, the image is stained in red. This red positive is treated to a weak bath of a copper salt and dried, then coated with bichromated gelatine, dried and exposed under the transparency from the negative taken through the red screen, and then stained up with blue. The yellow image is obtained in the same way, or it may be obtained reversed, and used as a cover-glass.

Mr. E. T. Butler has kindly lent me a few slides which are made by his process, which practically consists of dyeing the gelatine first, then bichromatizing, exposing and developing. These results are specially interesting, as they are from negatives taken, all three simultaneously, in a camera which Mr. Butler has invented.

#### PRINTS ON PAPER

As regards obtaining color results on paper, there have been a great many processes proposed or worked at one time or another. For instance, Drs. Miethe and Lehmann have suggested using the dusting-on process, in which successive coatings and dusting-on must be resorted to. Gum-bichromate printing has also been used by Perscheid and others, principally continental workers.

Dr. Selle uses the property of certain dyes which stain bichromated gelatine hardened by the action of light more strongly than the unhardened, and proceeds as follows: A sheet of glass is coated with a zinc-white collodion, which acts as the support for the colored picture. On this collodion film a bichromated gelatine film is coated, and when dry exposed under one of the negatives. By washing in cold water the undecomposed bichromate is removed from the gelatine film, whilst the chromic oxide formed by the action of light remains behind. The print is now laid in an aqueous solution of a mordant dye of corresponding color—that is to say, a dye which has the property of not staining pure gelatine, but of combining with the chromic oxide to form a so-called “color lake;” thus only those parts of the gelatine film which have been affected by light will be dyed. When dry, the first image is coated with collodion and a film of bichromated gelatine coated on top of it. On this light-sensitive film the second constituent negative is printed, after the outlines are made to accurately coincide with those of the first image. The second print is treated like the first, and stained in the proper color. Finally, after the second image has been coated with collodion, a third film of bichromated gelatine is coated on the top, and the third negative printed and dyed, etc. The finished print with the white collodion support may be easily stripped from the glass and mounted on a card. The colors are very permanent, because they are chromium lakes; yet no dyes appear to exist which possess all the properties which Selle’s process requires. This is the principal reason why this interesting and really original process has not been introduced in practice.

Schmidt, of Berlin, also uses a similar process.

Reichel, of Munich, makes three-color photograms by printing the three constituent negatives on collodio-chloride paper, tones them in special baths, blue, red and yellow, and then mounts them one on top of the other. For the red image a sulphocyanide gold bath with sodium iodide and potash is used; the yellow print is made by toning with lead, and the blue with iron salts.

Another process for the preparation of prints has been patented by Sanger-Shepherd and Bartlett. Three images are obtained on celluloid films as usual; these are stained with suitable dyes, and the damp colored film is brought into contact with paper coated with soft gelatine. The dye is transferred fairly



R. DUEHRKOOP

LOVE AND INNOCENCE

quickly into the soft gelatine, and when the dyed film is lifted up the colored image is seen on the paper. The same process is gone through with the two other constituent images, which must, of course, be laid on the paper so that the outlines coincide. The dye is sucked out of the image by the gelatine, and the celluloid images, which thus become colorless, can again be dyed, and can be used for making prints. Like the dye solutions, they are quite permanent. The process of printing may be examined from time to time by lifting up one corner of the paper.

Another process introduced by the Lumière N. A. Company is briefly as follows: The three constituent negatives are obtained in the usual way, and that taken through the red filter is varnished with celluloid varnish. A sheet of glossy bromide paper is soaked in water for at least half an hour, then, whilst wet, squeegeed into contact with the red filter negative, and exposed, developed and fixed. After thorough washing, the image is converted into Berlin blue. Prints from the other two negatives are now taken by printing bichromated gelatine films on thin celluloid, the celluloid being in contact with the film of the negative; then developed with warm water, and stained up in the red and yellow dye baths, and then successively transferred on to the blue image, the celluloid being stripped in each case.

The Pinatype process was, I believe, demonstrated to you on Monday evening. Briefly it is as follows: Transparencies are made in the usual way on ordinary plates; these are then printed on bichromated gelatine, and the plates thus obtained stained up in the respective dyes, and gelatinized paper, after being well wetted, is squeegeed in succession to the three-colored plates, and the dye is transferred to the film of gelatine. The dyed print plates will keep, and may be repeatedly used, and only require restraining before each pull.

#### CARBON PROCESSES

Recently we have had commercially introduced three-color carbon tissues. Those of the Rotary Photographic Company are coated on very thin celluloid, which is placed in contact with the film of the negative, so that double transfer is avoided. The Autotype Company use the double transfer process for their color tissues and a semi-transparent temporary support.

The results obtainable by these processes are excellent, and there is nothing to learn, as they are nothing but the carbon process.

It is utterly impossible to give you any complete idea of all the methods which have been proposed and patented for obtaining transparencies and prints; to do this would compel us to undertake an all-night sitting. I have sketched in the principal processes, those which we may justly consider as in practice.

Possibly I should mention Drac's process, in which no color filters or screens are used, but the light is split up by means of prisms into definite sections of the spectrum, and these are used for making the negatives and projecting the transparencies.

Then there is an extraordinary process patented by Schinzel, which, if it can be worked, should be valuable, but I can see some difficulties in the way.



R. DUEHRKOOP

TWILIGHT

Briefly, a plate is coated with three sensitive films, each of which is sensitized for a particular region of colors, and carries a color-screen in itself. After development and fixation the plate is treated with hydrogen peroxide, and the silver sets free nascent oxygen, which bleaches the dyes; then on removal of the silver the result would be a photograph in colors. There are other modifications suggested, but it looks rather visionary on paper.

Gurtner, of Berne, has patented a two-color process, in which only one exposure is required. A chlorobromide transparency plate is dyed in an aqueous solution of naphthol orange and placed film to film with a panchromatic plate, and the exposure is made through the glass of the transparency plate.

The orange-dyed transparency plate acts during exposure first as the sensitive plate for the blue rays, and secondly as a light-filter, which only permits the red, yellow and green rays to reach the panchromatic plate. On the first plate there will thus be only the blue parts of the picture represented as black; on the second plate, only the red, yellow and green parts will be black. In other words, the transparency plate gives the negative for the yellow print; the panchromatic plate, the negative for the blue print.

The prints are made as follows: From the panchromatic (blue) plate, a Berlin blue print is made by any of the well-known methods, either by toning

a transparency plate or bromide print or by printing on ferro-prussiate paper. The transparency (yellow) plate, from which the stain is quickly removed by fixing and washing, is either printed on P. O. P. or on stripping collodio-chloride paper. The prints should be fixed with ammonia without toning, and will thus acquire a muddy yellow or yellowish-red tone. The yellow transparency is now directly combined with the blue, by placing the plates film to film. If a print on paper is required, the collodion print is transferred direct to the blue print. It is obvious, without further elaboration, that this process can never give us photographs in natural colors. Even if our eyes cannot directly recognize red in a landscape, yet in the multitude of compound colors red is always present. Moreover, the inventor admits that his process will not reproduce red.

This recalls the fact that plates with two such films and, further, plates with three films specially sensitized and bearing their own color-screens, are obtainable; whether they are of any practical value I am not prepared to say.

#### THE JOLY PROCESS

I have reserved to the last any mention of what we may justly call the one-plate processes. The first of these was that invented by Dr. Joly, our president of last year. In this process all the color-filters were ruled in parallel lines on one glass, and this was placed in contact with a plate, and the exposure was made through this compound-line filter-screen. From the negative thus obtained a positive was made on an ordinary black-tone lantern-plate, and this bound up in contact with a screen similarly ruled, only with the correct colors, which were slightly different to those of the negative-taking screens. This process was followed or was independently contemporaneous with the McDonough process, an exactly similar one.

Sampolo and Brasseur had also a somewhat similar process, but these processes were not commercially successful. For one reason we had not satisfactory panchromatic plates, and another was that the ruling was comparatively coarse, so that when projected the lines were distinctly visible on the screen. The most important reason, to my thinking, for their non-success, lay in the fact that they were glass processes and would not give prints on paper.

"Sheets of ordinary negative glass are coated with bichromated gelatine, and exposed to the light through a negative plate of transparent and opaque parallel lines. The light passing through the transparent lines of the negative renders the gelatine insoluble in warm water, the unexposed portions washing away, thus securing upon the glass colorless gelatine lines, which, with the plates now in use, are from  $\frac{1}{16}$  to  $\frac{1}{32}$  of an inch in width.

"The plate is then immersed in a color-bath of a suitable green dye, and then in subsequent baths to render the color stable, washed and dried. The appearance of the glass is a delicate green tint. It is then recoated over its entire surface with bichromated gelatine, and again exposed to the light through the opaque lined negative, taking the precaution to have the green lines protected by the opaque lines of the negative, and also one-half of the remaining unexposed surface.

"The plate is treated in a similar manner after this exposure as for the green lines, except that a red dye is now used, and the plate is rinsed and dried as before. The appearance of the plate is yellowish in tone. It is then coated a third time, again exposed, and passed into a bath of violet-blue dye. This gives the plate a neutral tint, from the recomposition of the three elementary colors, the surface being completely covered without overlapping of the edges.

"It is possible by this photographic-printing operation, with special machinery for aligning the plates and printing them automatically, to obtain remarkable uniformity. The increased fineness of the color-lines renders them invisible to the eye, and registration of the lines with a transparency would be impracticable.

"The next operation is that of coating them with a panchromatic emulsion, when they are ready to be exposed in an ordinary camera, developing and fixing in the usual manner, and obtaining a negative in colors. It is obvious that in this case the exposure must be made through the glass."

The negatives obviously show the subject in its complementary colors, and it is only necessary to print on a similar plate to obtain the colors as in nature.

#### THE LUMIÈRE PROCESS

Recently, too, MM. Lumière, the distinguished chemists of Lyons, have patented the use of potato starch. This is sifted so as to obtain as far as possible starch grains of approximately the same size, then they are stained with the necessary filter-colors, and mixed so that the mixture presents a uniform gray tint, proving that there is no preponderance of one color over the others. The mixture is then sifted over glass which is rendered sticky, and the grains adhere. Now it is important that there should be no overlapping of the grains, and that the interspaces of bare glass left between the grains — for they are shaped something like an elongated oyster-shell — must be filled up with an opaque material. They must also be protected by a varnish. There is also another point, and that is that starch is not transparent until imbedded in some material like Canada balsam. You will thus see that there are many difficulties to overcome, and when this multiple filter-plate is ready it has to be coated with a panchromatic emulsion.

The exposure is made, of course, through the glass, and after development and fixation the result is a negative not only as regards light and shade, but also colors; that is to say, the complementary colors are obtained, so that to obtain a positive one must either print on to a similarly prepared plate or convert the negative by one of the well-known methods into a positive direct.

Drs. Smith and Merckens, of Zurich, have patented the use of very small geometrical figures of all sorts for exactly the same purpose, and they claim that they can make a printing-paper by the same means. These patterns are impressed on a gelatine plate mechanically, and the emulsion coated on top, the exposure being made through the glass.

Some such process as this, if practicable, will, I think, solve the problem of color-photography. One plate carrying its own filters, and a similarly colored

paper whereon to get our results; but if the latter, the colored paper, is impracticable, then we have means at our disposal in existing methods of obtaining prints in colors. What we want, as I have proved by being able to make a print from a Joly negative, is colors on paper.

There is one fact that I should like to mention before leaving this particular subject. All these one-plate, mosaic or line processes were outlined by the well-known French writer, Louis Ducos du Hauron. In his work, "Les Couleurs en Photographie, Solution du Problème," published in 1869, he suggested the use of lines and dots for particular purposes, but it is not generally known that in a letter to M. Lelut, a member of the Institute of France, which was written in 1862, seven years previously, he points out that lines, dots and geometrical figures could be used. As a matter of fact, there are very few variants of three-color photography that Ducos du Hauron did not outline, although they have been the subject of recent patents.

#### THE FUTURE OUTLOOK

Possibly I might say a few words as to the practice of color photography. Recently it has been so simplified by the introduction commercially of satisfactory panchromatic plates, of excellent filters which absorb really very little light save that which they ought to absorb, and easy printing-materials, that it is a subject which should receive more attention than it does. What has stood in the way of its more general adoption, what still stands in the way, is the want of a camera which will enable us to take all three negatives at once, a camera which can be obtained at a reasonable price, is simple in construction and working. Given this, I am convinced that where we now have one color worker we should have a hundred. The very fact that one must make three consecutive exposures limits our work enormously; whilst in the studio this is not felt so much, it is a great drawback for all outdoor work, where trees, cattle, etc., will not keep still just to please the photographer. It is possible that I am optimistic and prejudiced, and that the pictorial worker who loves to suggest rather than delineate an object will smile at my ideas that color photography in another few years will be the rule and not the exception, and will say that it can never be a means of pictorial photography because it will not allow him to make eccentricities. My answer is that it will place a still greater power in his hands because he cannot only destroy and alter form, but color also.

The future of color photography lies in a one-plate exposure and one-printing paper, but the intermediate step is the one-exposure three-plate camera, and three printings. Color photography, as it stands at present, has been commercially proved in Berlin, in London, and in Plymouth. There is a vast field open before it, not only in portraiture, but in every subject that has color, and when we look around us it will be found that the exception in nature is monochrome, whereas in photography it is the rule.— *British Journal of Photography*, reporting a paper read before the Photographic Convention, Southampton.





A PAGE FROM A FLORAL CALENDAR

## DECORATIVE POSSIBILITIES OF PHOTOGRAPHY

WILLIAM S. RICE

**A**LMOST every amateur photographer collects a stack of negatives during a year of picture-making. These are good, bad or indifferent — very often the latter. There are, however, always some successful negatives, at least in the work of more serious photographers, that can be turned to some decorative use.

While the inexperienced amateur can do something in decorative work, it is obviously better that one who aspires to produce unique or artistic decorative results with photographs should have a fair knowledge of the handling of the camera and of the printing-process.

Modern decorative art deals with all materials, used in all places; and in much of the work of designing, photography may be made useful. The subject

of decorative photography covers a broad field, as one may observe for himself by glancing through various periodicals, especially those dealing with nature or outdoor life. Not only are photographs being used as covers for magazines, but for books, booklets and catalogues as well.



A PHOTOGRAPHIC BOOK COVER-DESIGN

The modern fad of making souvenir post-cards offers unlimited opportunities for the camerist's work. Souvenir post-cards are not more difficult to print than ordinary gaslight paper. The manufacturers of the sensitized cards usually enclose a couple of masks with which one blocks out that portion of the negative not desired to be included in the picture, and the rest of the process is carried out as in ordinary printing.

The photograph is eminently adapted for calendars, and if made of twelve gray cards with an appropriate landscape or flower photograph for each, trimmed

and mounted artistically, with a panel effect, would serve to remind its owner of the giver during each month of the year.

A floral calendar which the writer made, the June page of which is shown as one of the illustrations accompanying this article, was one that afforded considerable pleasure to its owner, as each page was suggestive of memories of bygone days spent in old-fashioned gardens. Having accumulated quite a collection of flower, plant and tree studies, this collection was drawn upon for the series for the twelve months. The series was as follows:

- January — Pine branch with cones.
- February — Winter tree buds.
- March — Daffodils.
- April — Arbutus.
- May — Apple-blossoms.
- June — Roses.
- July — Oxeye daisies.
- August — Thistles.
- September — Goldenrod.
- October — Wild grapes.
- November — Bursting milkweed pods.
- December — Holly and Mistletoe.

Instead of trimming and mounting the photograph in the usual manner, an oblong panel was drawn on the print, which was then cut out with a sharp pair of scissors. The effect aimed at was to have the flowers and leaves breaking through an oblong opening. Two parallel lines drawn with pen and ink completed the decoration. The calendar slip was then glued in place on the same gray card.

Last summer, the writer made a series of juvenile photographs for a Child's Calendar to be published in a forthcoming issue of a New York publication. The subjects of the series are as follows:

- January — Little girl coasting.
- February — Schoolboy drawing a valentine.
- March — Boy and girl flying a kite.
- April — Boy planting flowers.
- May — Little girl gathering blossoms.
- June — The barefoot boy.
- July — Children celebrating the Fourth of July.
- August — Boys eating melons.
- September — Teacher helping little girl to do sums.
- October — Boy making a Jack-o'-lantern.
- November — Child feeding turkeys.
- December — Christmas morning: little girl in bed with toys.

This Child's Calendar might serve as a suggestion to others who, doubtless, have many children's photographs that could be adapted to the various months of the year. There is a form of calendar-making that will provide a

financial reward, if it be well managed. It is to make a local calendar, in three to twelve sheets, and offer it for sale at the home art or book stores. To make such a calendar, the photographer should begin a year ahead to plan and obtain suitable negatives. He should decide at the outset whether his calendar is to have three or twelve leaves. Then he may be on the lookout for the subjects that suggest the months and, possibly, the local conditions. A variety of



A SUGGESTION FOR A MENU-CARD

subjects will suggest themselves to the photographer, once he starts to "get busy" with his camera.

Calendar-pads may be bought of any stationer, but if one prefers to draw his own figures and letters, the result will be quite as pleasing.

For the making of menu-cards the photograph is adapted admirably in a variety of ways. Still-life, fruit, flowers and vegetables are, to my mind, the best suited for this line of work. The accompanying illustration of a menu-card was made in the following manner. The still-life subject of fruit was printed on Portrait Velox and then mounted on a light gray piece of thin cardboard. A scroll was drawn with a brush and India ink, and the word "MENU" let-

tered in with pen and ink. The rest of the space was lettered in the same way and this card mounted on a heavier and darker gray card. Should one desire a large quantity of these cards, perhaps the better and less expensive way would be to have the original reproduced by the half-tone process the actual size desired. Or, if one has a large camera, the completed menu may be photographed, mount and all, and as many printed as are desired, thus avoiding the task of lettering and mounting so many.

Another feature is the application of decorative photographs to book and magazine cover-designs, headings, initial letters, title-pages, etc. The photographs may often be used direct, as in the case of the daffodil design, or, again, the photograph may offer the suggestion to the artist for a drawing. The Easter cover-design served as the model for the May cover of the *Overland Monthly*; from this the writer worked up a colored drawing for the publisher idealizing the subject slightly and introducing the Bermuda Easter lilies instead of the callas. The figure of the woman in the photograph was printed on Portrait Velox, and the arched effect was obtained by cutting out a matt from black paper and placing it between the negative and the printing-paper. The photograph was mounted on gray mounts, in soft shades. The panel lines were ruled with pen and ink and the shading put in with a wash of India ink and water. A great deal depends upon the harmonious colors of the mounts; and a successful selection rests largely with the taste of the individual.

One should remember, in making a photographic design to be offered to some publisher, that boldness and simplicity of subject, as well as of line and mass, are the qualities most desirable. This applies nowhere more aptly than in flower or fruit photography. The great mistake made by beginners is in the selection and grouping of the subject. The tendency is to put too much into the composition. What could be more lovely than a bowl of June roses in the midst of their wealth of leaves and petals? But put this same bowl of roses into a photograph, and the result is confusion. Again, even a small bunch of daffodils, artistically arranged, may look overcrowded in a photograph, and will present so many scattered high lights that the result will be far from pleasing to the eye.

The best plan is to select two or three of the best blossoms, or, sometimes, even a single spray, and be content with simplicity. A couple of well-formed roses and a bud, arranged with taste, will show to the best advantage the graceful forms and delicate modelling of these beautiful flowers.

To the worker in flower-photography the decoration of Christmas and birthday cards will appeal most strongly. For the decoration of the latter, other subjects may be quite as appropriate, however, as a portrait, a scene in which the friend has had a part, a familiar nook in the home, or some favorite pet dog or cat.

To mount such prints artistically, glue them to a light gray cardboard cut an eighth of an inch larger than the print, and allow a considerable space to one side for some appropriate verse or inscription. The whole should then be

mounted on stiff mounting-board of a shade a trifle darker than the other. Sepia prints mounted on creamy, buff paper and this mounted on rough, pebbled cardboard or some soft, brownish gray would be very harmonious. The words may be drawn directly upon the first mount with brush or pen, and, when care-



A MAGAZINE COVER-DESIGN

fully done, the effect is very pleasing indeed. Two holes should be neatly punched through the card near the top and a gray or brown silk cord used to hang it up by.

Very good prints of certain kinds of flowers, leaves, grasses or ferns, that may be utilized decoratively, can be made by any one possessed of a little taste, without the use of the camera. Such pictures are known as solar prints and may be made with any of the gaslight, blue print or other sun-printing papers. The natural leaf, be it spray of fern or maple-leaf, is laid on the glass inside the

printing-frame, the paper is placed in contact and then the back is clamped in its place. A good, long exposure is given and the result is a light image of the leaf, or grass with more or less veining, against a dark background. I mention this latter method of making prints in connection with the decorative possibilities of photography, because it will, doubtless, appeal to those who do not have large cameras with which to work, and who would, without this knowledge, miss much pleasure in decorative floral photography.



## THE ALUM FIXING-BATH

PHIL M. RILEY

**A**T this season of the year when dark-room activities are at their height, sodium hyposulphite, as a solvent of the silver salts, is probably the most used of photographic chemicals. Therefore, the composition of a fixing-bath consistent with the best results obtainable is of timely interest. Shall it be an ordinary hypo bath, a plain acid-hypo bath or an alum-hypo bath? This has been a much mooted question for some time, but at last it seems to have been proven conclusively, by the recent experiments of A. and L. Lumière and Seyewetz, that an alum-hypo bath is in every way superior to the others mentioned.

The experiments of these well-known photographic chemists bring to light a number of possibilities for hastening the process of securing a dry negative ready to print from, and are of especial interest because the investigations of these men, ever being carried out with the utmost accuracy and completeness, can be relied upon with absolute certainty.

The ordinary hypo bath, as is well known, means a solution of hypo in water, the proportion being about one part of hypo to four parts of water — a slight variation in the strength does not matter. Acid-hypo is a trifle more complex, for alums and acids, with the exception of sulphurous acid, react with hypo, the solution becomes turbid, sulphur is set free and subsequent sulphurization of the negative-image is sure to result.

Sulphurous acid does not precipitate sulphur, but, because of its unstable condition, is very unsatisfactory in actual use. For that reason acid-hypo baths are usually prepared by dissolving sodium sulphite in the hypo solution and then adding an acid such as sulphuric. The result is that as the acid attacks the sulphite much more readily than the hypo, the two react and set free sulphurous acid in the solution, the ordinary acid is destroyed and the hypo remains unchanged. The success of such a bath depends upon using each chemical in proper proportion, and any turbidity of the solution shows that this has not been done.

If alum, formosulphite or formaline is added to an acid-hypo bath, the solution acquires the property of hardening gelatine emulsions either on plates or films. Formaline, however, is objectionable because it tends in time to strip-

ping of the film and causes discoloration of the fixing-bath if any of the developer is carried into it; therefore alum is preferable. Here again sodium sulphite plays the same part as before, except that it prevents the decomposition of hypo by alum as well as by acid. Its use for this purpose was first suggested by Valenta, in 1889.

In the actual use of an alum-hypo bath, as described above, it has been found somewhat difficult, owing to the varying purity of chemicals, to maintain the proper proportions already referred to, and prevent turbidity of the bath, with its subsequent detrimental effect upon the negative-image. A. and L. Lumière and Seyewetz have, therefore, conducted a series of experiments, recently, for the purpose of compiling a more satisfactory formula, and they find that the bisulphites of aluminium and chromium in right proportions will render gelatine emulsions insoluble without precipitating sulphur; also, that equally satisfactory results may be obtained by combining an alkaline bisulphite with ordinary or chrome alum.

As to the comparative action of the two alums, the experiments mentioned show that with a 15 per cent solution of hypo the most complete insolubilization of the gelatine emulsion is effected with 0.5 per cent of chrome alum or 1.5 per cent of ordinary alum. In other words, chrome alum is far superior to ordinary alum, as only one-third of the quantity is needed and by its use the gelatine is so hardened that it will resist a temperature of 212° Fahr., while if fixed with ordinary alum the gelatine becomes softened and strips from its support at 167° Fahr. The quantity of sodium bisulphite should be about 1 or 1.5 per cent, and any considerable variation has a marked effect upon the degree of hardening.

Working on the lines of the above, Messrs. Lumière and Seyewetz advocate the following formula:

Hypo .....	3 ounces
Sodium bisulphite lye .....	100-150 minims
Chrome alum .....	50 grains
Water .....	20 ounces

Dissolve the hypo in part of the water, the bisulphite and chrome alum in the remainder and mix the two solutions. Information regarding sodium bisulphite lye and a formula for preparing it were published in the November PHOTO-ERA.

Plates which have been fixed in this bath may be freed of hypo as quickly as if the film were not hardened, and after-treatment of the negative, such as intensification and reduction, will proceed just as rapidly as if an ordinary hypo bath were used. Probably the greatest advantage gained, aside from permanence of the image, is the possibility of using hot water for subsequent washing, since the gelatine will not soften. This means a great reduction of the time required for washing the hypo out of the emulsion, and also permits of heat being used to hasten drying. An even heat must be maintained, however, as a sudden change would result in markings on the negative.



## A GRADOMETER

C. WINTHROPE SOMERVILLE

**E**FFICIENCY and advance make for the most successful in man and his work. The greatest value of a discovery is that it leads to further discoveries. Hence we advance. Proficiency is attained and maintained, not only by keeping abreast of, but endeavoring to get ahead of, present knowledge.

The average worker has a negative from which he obtains a scale of gradation in the form of a bromide, gaslight, carbon, platinum or P. O. P. print. He may be satisfied with it or not. If he *is* satisfied with it, why should he be; if he is *not*, why should he not be — when he has no means of telling whether it is the best he can get?

One uses a certain plate for a specific purpose; is it always known that this is the best plate?

A certain brand of bromide paper will give you a certain result with a certain negative; can you tell whether a different brand will give a better or worse scale of gradation? Certainly not by examining the scattered gradation on the print. Yet the means of obtaining such information with a very great degree of accuracy is very easily secured.

A gradation meter, or gradometer, is a simple enough instrument to make for one's self, and is an invaluable possession. By its means we are enabled to ascertain with certainty the best plates and papers to use, and *also* the best manufacturers of such; which fact is good, since it will help us to keep them endeavoring to get ahead of present knowledge, and not stagnate with supreme satisfaction at what they have already produced. I do not suggest that this is the case, but it *might* be, in which case England would soon lose its present supremacy in photographic manufactures.

Take an ordinary or slow plate for the purpose. Place an illuminating-source of about the intensity of an ordinary candle (fourteens, I believe they call them) behind a diffusing-screen of tissue paper or ground glass, the whole standing on a table or bench at least five feet long. Plumbing down from the outside face of the screen, mark off four feet.

On the edge of a dark slide (plate-holder) paste a piece of paper, and mark off twelve equal dimensions, commencing at the bottom of the slide shutter where it touches the slide. For a quarter-plate instrument make the divisions three-eighths of an inch; on a half-plate, half an inch; on a whole plate, five-eighths of an inch.

Now it is required to give a series of exposures in which each one shall be twice that of the one preceding it.

There are several methods of doing this, but the most satisfactory is a combination of time and distance increases or decreases.

The exposures required are in the ratio of 1, 2, 4, 8, 16, 32 and so on. If you use a screen with a slot in it, and give a separate exposure to each division

of the plate at a fixed distance, when you get to the twelfth exposure after starting with one second, you will require to wait for a period not less than one hour and ten minutes, not including the time required in manipulating the screen. And there is, moreover, the objection of the possible and probable overlapping of the gradation strips. If, on the other hand, you combine increasing distance in accordance with the law of radiation with fixed exposures the time occupied is very much shorter.

Make your first exposure of 64 seconds at a distance of one foot by raising the shutter of the slide to the first mark; then make another of 32 seconds at the same distance, and another of 16 seconds, raising the shutter one division each time.

Now place the slide two feet from the screen, and give the exposures of 32 and 16 seconds. Move the slide again to a distance of four feet from the screen, and give the exposures of 32, 16, 8, 4, 2, 1, 1.

Graphically you will have given twelve exposures, as follows:

4 ft. 32, 16, 8, 4, 2, 1, 1 seconds.	
Total, 64	
2 ft. 32 = 128 at 4 ft.	
16 = 64 "	
Total, 192	
1 ft. 64 = 1024 at 4 ft.	
32 = 512 "	
16 = 256 "	
Total, 1792	
Light Screen.	
+ Light.	
Totals,	Ratio of Exposures and Equivalent Densities
64	1 . . . . 1
192	2 . . . . 2
1792	4 . . . . 3
	8 . . . . 4
	16 . . . . 5
	32 . . . . 6
	64 . . . . 7
	128 . . . . 8
	256 . . . . 9
	512 . . . . 10
	1024 . . . . 11
2048	2048 . . . . 12

Another method is to expose to a light projected through a lens, and stop down each time, but I have not found this so accurate. The unit of exposure may, of course, be made any time consistent with the accuracy of manipulation. *But the lightest grade should be practically bare glass.*

The advantage of raising the shutter and exposing the plate the whole time is the absence of any overlapping or spaces between the gradation strips. It is, of course, necessary to shut out the light each time the shutter is raised.

The plate must be developed to finality without more than one minim per ounce of bromide.

A good make of slow plate will easily take an exposure of 2,048 seconds to a light of the intensity described — which in my case is a flat flame burner, burning at the rate of half a foot an hour — without giving reversal at the densest end; my own experiments proving such makes as Wellington and Ward, Barnet, Imperial, Kodak, Gem, etc., to be well within the limit. A developer of a non-staining order must be used.

The above method of making the gradometer will give a series of gradation strips in which each one is twice the density of the one preceding it; if, however, it is required to make one with intermediate tones, then the screen and slot method must be employed.

The method is simple enough, but demands some skill in adjusting the slot for each exposure, so that there is no overlapping or spacing between the strips.

Supposing the gradometer to be of half-plate size, the screen must be of at least thirteen inches in length, and made either of thick paper or card. A slot half an inch wide is cut transversely in the middle of the length. The length of the slot is dependent on the printing-frame through which it has to work. A cleaned half-plate is just placed in the frame, and on this the screen is laid with the bottom edge of the slot corresponding with the edge of the opening of the frame. On the screen is laid the plate, film in contact, and lastly the back of the frame.

When the first exposure is made, the springs at the back of the frame are loosened, and the screen moved one degree up and the next exposure made, and so on.

In order to reduce the time of exposures to a minimum, advantage is taken of altering the printing-distance, as in the other method.

To prove that you *do* get double the intensity with double the exposure, it is only necessary to make exposures (preferably on a developing-paper) on two different grades, at a corresponding distance from the light, of such duration that, at the finality of development, you just get visible reduction. For example: if an exposure be made on the grade corresponding to 256 at one foot from any light, and another be made on the grade corresponding to 16 at four feet from the same light, you will get precisely the same result.

Now the uses of such an instrument are many and varied; amongst some of the most important are the following:



E. R. JACKSON

TIRED

*Plate Speeds.*—A rough but excellent estimation of the speed of one plate in comparison with another of different quality or different make may be obtained by giving a similar exposure to each behind the gradometer, at the same distance, and developing both in the same dish to finality.

The constancy of speed in any one particular plate is also to be obtained in this way.

*Density and Reversal Point.*—The density-giving powers and reversal point of any plate of greater speed than that of the gradometer is to be obtained in a similar manner. But some system must be employed in these experiments.

As far as possible, a constant light and constant distance should be used, and to prevent waste of material, two or more exposures of different periods should be given by masking part of the plate tested.

The plate should be developed in the dark with a developer of normal strength of a non-staining order, and for a time ensuring finality of development. It is permissible to use a small quantity of bromide in the developer, provided the time for complete development (finality) be well exceeded.

*As an Exposure Meter.*—The gradometer may be used as an exposure meter for printing-purposes with considerable accuracy by comparing the density of a particular part of any negative (generally the highest light) with one of the grades, and printing by the same light. And in connection with this let it be remembered that if grade No. 7 (64) required, say, sixty-four seconds at

four feet, the time may be reduced for printing-purposes to sixteen seconds at two feet, or four seconds at one foot.

For printing-out papers, platinum or carbon, an exposure may be made through one of the lighter grades, say No. 4 (8), and the time required for visible reduction calculated for the highest light grade. Or, better still, expose a strip of paper for a definite time, and see through which grade visible reduction appears on development; then simply multiply for the deeper grade.

*Example.*—Expose a carbon strip for ten minutes, having already ascertained by comparison the density of the highest light. Remove the trial strip of paper from the frame, and, noting the time, start the printing of intended print. Now develop the trial slip, and see which grade has been printed through. Say there is visible reduction in No. 5, and your highest light is equal to No. 10, then  $\frac{5}{10} \times 10$  minutes = 320 minutes, or 5 hours, 20 minutes.

*Bromide Paper.*—The different speeds, nature of shadow deposit, differences between various brands, such as “platino matt” and “ordinary,” are to be found by means of the gradometer; also the gradation scale-length of this and all other papers.

*Gaslight Papers.*—The shortness of the gradation scale, difference in developing, intensification and toning properties, etc., between this and bromide paper, are most effectually ascertained.

*Toning.*—The alteration in the scale of gradation due to various toning-processes is most effectively seen by making trials on strips exposed behind the gradometer.

*Intensification and Reduction.*—The powers of various intensification and reduction processes can be tested with certainty, and comparisons made, thus insuring against the possible loss of a valuable negative by the first use of an unsuitable process.

*Enlarging.*—The gradometer is placed in the lantern, a definite short exposure given, the strip developed to finality, and the exposure calculated for the densest part of the intended negative in a similar manner to contact prints.

*Generally.*—The peculiarities of various developers on plates or papers; effect of printing behind colored glasses of varying shades and intensities; effect of different forms of printing-lights; effect of altering printing-distance, etc., etc., or testing the effect of any experiment, process or condition on the scale of gradation, is to be obtained perfectly satisfactorily to visual perception.

Now, it will be understood that scientifically exact measurements, such as are obtained by means of a spectra photometer, will not be possible with such an instrument, neither is it desirable, since its use is only in connection with graphic reproduction. And since the estimation of the value of tones in graphic reproduction is limited to our visual perception, it will satisfy all demands.

Two words of caution I would give. Let the light to which the plate is exposed during the construction of the instrument be such that the highest tone is nearly bare glass, and the deepest greater than any density you are likely to secure on any negative. The slowness of the plate will, of course, have a direct

bearing on this. Also, make your exposures by hand, and governed by clock-work; and in connection with this it is well to remember that if you want to give an exposure of one second, at, say, four feet, it is not possible to do so by hand, but if you remove the plate to a distance of twelve feet, an exposure of nine seconds will be the equivalent, and this is possible by hand. The law of light intensity reads: "The intensity of a light is inversely proportional as the square of its distance from the source."

It is quite necessary to varnish your gradometer.—*The Amateur Photographer, London.*



## STEREOSCOPIC VIEWS WITH ANY CAMERA

DR. JOSEPH H. NOBLE

**S**PECIAL and expensive apparatus is not required to make stereoscopic views. An ordinary camera will answer every purpose except for taking views of moving objects. For such work a stereoscopic camera must be used.

Theoretically, to make a stereoscopic view, two photographs of the same object must be taken from points just as far apart as the human eyes —  $2\frac{1}{2}$  inches. In practice, however, it is customary to use a distance of three inches in order to increase the appearance of relief by a slight exaggeration. It is possible to make these photographs in several ways.

Set up the tripod on level or nearly level ground. Make the first exposure, then move each leg of the tripod three inches directly to the right. Centre the view if necessary by turning the camera on the tripod screw and make the second exposure on another plate. Use the same stop for both plates; give both the same exposure; develop both for the same length of time and make both prints on the same kind of paper. A glossy paper is best, as the stereoscope shows the grain of a matt surface paper.

Now trim the prints to stereoscopic size, 3 inches wide by  $3\frac{1}{4}$  inches high. This must be carefully done so that any object in the view is the same distance from the bottom of both prints. Mount the prints on a stereoscopic mount  $3\frac{1}{2} \times 7$ . The print representing the view as seen by the left eye is mounted to the left of the centre — the other to the right. After mounting one print, hold the card and the other print in the stereoscope to determine the exact position for the other print. Any portion of one print should be exactly three inches from the similar portion of the other.

For all stereoscopic work a small stop should be used — not larger than f.16. Everything in the view must be sharply defined. A good foreground adds greatly to the stereoscopic effect. In very distant views it is sometimes of advantage to make the exposures from positions wider apart than usual — for instance, from six to twelve inches — mounting the prints, however, as previously described.



THOMAS A. MORGAN

THE ENTRANCE TO THE WOODS

When making indoor exposures the tripod may be dispensed with in the following manner: On a large piece of cardboard draw two lines at right angles to one side and three inches apart. Place this on a table, stepladder or a chair, and make the two exposures from the two positions marked on the card by these lines. By using a board so marked and fastened on the tripod this method may be used outdoors if desirable.

With a camera having a rising or sliding front a simpler method may be employed. Slide the lens one and one-half inches to the left of the centre and expose; then slide it one and one-half inches to the right (three inches from the first position) and make the second exposure. If the sliding front does not have a range of three inches, two inches will give fairly good results. The prints must be mounted with similar objects three inches apart as before.

A stereoscopic attachment which may be used as a substitute for the above methods may be made as follows: Procure a wooden box with a sliding lid — about 1 x 3 x 6 inches is a good size. Cut out part of one end so that the lid can slide all the way through. Then cut a small round hole the size of the tripod screw in the middle of the lid and one in the middle of the bottom of the box. With a suitable bolt put through the hole in the lid fasten the lid *upside down*

on top of the tripod. Also fasten the box on the bottom of the camera with the tripod screw, and slide the box in place on the lid, thus fixing the camera on the tripod. Slide box and camera one and one-half inches to the left of the centre and expose; then three inches to the right of that position and then expose another plate. These positions should be marked on the lid.

Small plates  $3\frac{1}{2} \times 3\frac{1}{2}$  are well adapted to stereoscopic photography, and can be readily used by means of kits or the special plate-holders now made at a reasonable price for just such purposes.

The preceding portion of this article applies to both film and plate cameras. Both exposures may, if desired, be made on one plate by making first one half and then the other. A  $5 \times 7$  camera is best for this; a stereoscope is made to view two photographs each three inches wide, and with a  $4 \times 5$  camera each view will be but two and one-half inches wide.

Take a black card-mount and cut it down to exactly the size of your plate-holder. By careful measurements cut out an opening of such size that when the card is laid over the plate-holder and the slide drawn, exactly half of the plate will be exposed. The cut edges of this mask should be blackened with ink or water-color.

Insert the card mask at the back of the camera in the slot intended for the plate-holder, thus bringing it directly in front of the ground glass with the opening in the card at the right. Focus the view on the exposed half of the ground glass. Place the holder between the mask and the glass (leaving the mask in); draw the slide, expose and replace the slide. Now move the camera three inches to the right. Turn the card so that the opening in the card will be at the left. Centre the view on the left half of the ground glass, insert the holder (containing the same plate); draw the slide, expose and replace the slide.

If both exposures are made exactly as described, and if similar objects in the view are pictured just three inches apart on the negative, the print can be mounted without cutting the views apart and reversing, as must be done if the stereoscopic camera is used. To give a neat appearance to the print, paste a narrow strip of black paper on the line of division on the negative.

To get pictures of the same object just three inches apart on the negative, draw two vertical pencil-lines on the ground glass, one one and one-half inches to the right of the centre and the other one and one-half inches to the left. Note some object in the first view which falls on the right-hand line. For the second view have that same object fall on the left-hand line.

If the camera takes the holder from either side, the holder may be inserted from the left for the second exposure, without changing the position of the mask. One of the images will be upside down, hence the views will have to be cut apart for mounting.

If the sliding-front method is used, it is better to turn the opening in the mask to the left for the first exposure (when the sliding front is pushed to the left), and to the right for the second. The views must be cut apart and reversed or mounting.



C. T. MASON

**D**URING my recent visit to Mexico City I was fortunate enough to meet two American agents whose names are well known among the photographic fraternity of the United States. These gentlemen were Mr. W. P. Wentz, of the American Aristotype Co., and Mr. Ben Eichelman, of the M. A. Seed Dry-Plate Co. It was in the private office of the American Photo-Supply Co., on Profesa Street, that the introductions took place, and the gentleman who kindly "did the honors" of the occasion was Mr. T. R. Crump, the genial, businesslike president and treasurer of the house. I had called to consult Mr. Crump on some matter pertaining to trade in Mexico, and was about to leave when the two agents entered. In his genial way Mr. Crump made me acquainted with them and the talk turned at once to photography in the sister republic.

I had already been interested in the street show-cases (*muestrarios*) of the many first-class galleries on San Francisco and Plateros Streets; but had no idea that two such travellers as Mr. Wentz and Mr. Eichelman would come all the way to Mexico City to lecture on the taking and printing of photographs. This, however, was what they were doing, and in the Mexican capital the entire photographic brotherhood was agog with interest, all eager to learn what these two agents had to tell them. Informal talks, more than lectures, they were, but the interest aroused was plainly noticeable in the various galleries I entered. That same evening of my introduction to Mr. Eichelman I had the pleasure of being entertained at dinner by him, and thus was enabled to learn much of the work being accomplished by photographers in Mexico, and, more especially, of the large trade done with the Republic by American manufacturers. It was owing to this growth in the Mexican trade that two such houses as the American Aristotype Co. and the M. A. Seed Dry-Plate Co. had judged it profitable to undertake a series of practical lectures in the various cities of the country. Just how much of our conversation I am at liberty to make public it is now difficult for me to know; but I am infringing no confidence in stating that the St. Louis firm does a very extensive business in Mexico and practically controls the entire market for plate goods. This is only to be expected where such thoroughly businesslike efforts are made for the introduction of its products, and where quality is maintained at the highest standard. In sending their demonstrators to foreign countries the work in view is practically identical with that accomplished at home. It is regarded as necessary for a thoroughly expert photographer, and one who understands the quality of the Seed plates, to go to the studios of other photographers and there show them the qualities in these plates, in such a way that they can obtain the same results. It is purely a study in lighting and chemistry, which cannot be successfully made plain in writing. These foreign travellers are also expected, of course, to report on climatic and trade conditions in all the countries they visit, but no special plate is manufactured for any trop-

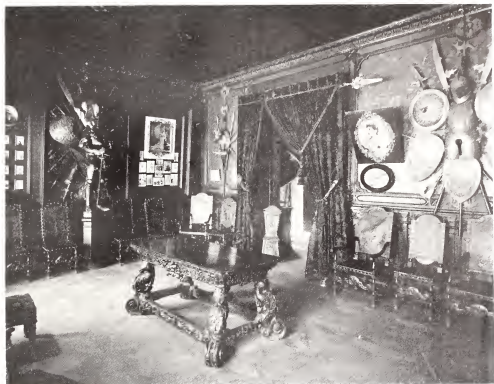
ical country, as this is considered unnecessary where the Seed plates are used. A packing of water-proof paper is all that is required to protect the plates in tropical countries, and particularly where there is a humid atmosphere.

While already interested in the work done by photographers on the other side the Rio Grande, my talk with Mr. Eichelman determined me to look more closely into the matter and to devote as much of my leisure as was convenient to an investigation of the conditions under which photography is practised in Mexico. I have already referred to the show-cases which are conspicuous features along Calle San Francisco or Calle de la Profesa. It needed no stretch of the imagination to see that much of the art life of the city was centred around the studios of the various photographers, and that, even to the loiterers about the streets, these admirable specimens of portrait work were somewhat in the nature of a popular exhibition in art. At no time of the day did these *muestrarios* lack their circle of admirers and critics, and, in watching the little gatherings around them, one was enabled to see all classes of Mexico's people, from the aristocrat to the peon.

It is largely in appreciation of this popular method of advertising that the photographers have expended a considerable portion of their capital in the installation of these handsome and often costly *muestrarios*. In the majority of instances, the Mexican style of architecture assists their efforts, in advantageously placing these mural show-cases in the broad well-lighted passages leading to the *pátios* or courts of the buildings. Hence, these entrances become a convenient and at the same time appropriate place for the advertising of these leading galleries. Within full view of the street and yet removed from its bustle and confusion, they offer every opportunity for a leisurely inspection of the work.

My attention was especially called to the elaborate samples of the Valletto Galleries, which are thus exhibited in handsome frames. The selection of one of these samples, at the time of my visit, was in the nature of information regarding the handsome woman who presides over the presidential mansion at Chapultepec. Mrs. Díaz is in every respect a queenly woman, and her stately grace has been admirably portrayed in the life-size figure which adorns the *patio* entrance of the Valletto Studios. There were other full-length figures, all done in the manner of a master, but this of the Señora Díaz impressed me as a veritable *chef-d'œuvre*.

It had also the result of inducing me to call on the firm whose work is thus beautifully displayed. My visit, of which there were many pleasant successors in the course of the next week or so, will always remain in my memory as one of the most delightful incidents connected with my visit to Mexico. It introduced me to three men whose personalities are deserving the highest respect, and who are photographers in the truest sense of the word. Of their personalities what impressed me most, I think, was their old-world courtesy of manner, a style — so it seemed to me — that would have harmonized admirably with the “knickerbockers” and laced coats of our grandfather's days. Their pleasing suavity of speech, combined with their courtly gestures and bearing, suggested a culture



THE VALLETO RECEPTION-PARLOR, MEXICO CITY

of mind beyond the ordinary. Contrasted with the often too abrupt style and the lack of polish so unfortunately too prevalent among our own photographers, there was much in their conduct to be cited as an example to others. They were delighted that a stranger should take so much interest in their work and wish to write an article about photography in Mexico. There was something beautiful in their lack of self-conceit, and in their naïve comments on what Brother Julio or Brother Ricardo had done. Of their patience, on which I infringed so largely, I can only say that it exceeded any experience of mine elsewhere. They not only showed me their beautiful reception-parlor, but took me over all the apartments on the upper floor, and explained the workings of each so minutely that the merest novice would have understood them. We spoke in French and in Spanish, and occasionally in English, and in all three languages they impressed me as men who knew what they were talking about. Every branch of their work seemed to hold a strong fascination for them, from the posing of their sitters to the artistic mounting of the finished portrait. Two things, however, it seemed to me, interested them most — their artificial lighting of subjects and their enlargements to full, life-size figures. The latter is a branch of their art that, I think, is unsurpassed by any of our best New York masters of the camera.

What particularly struck me in going through the various departments was the order and method that were everywhere evident. The entire upper floor of the large building in which they reside and work is devoted to these several departments. The retouching-cabinet, the printing and toning rooms, the mounting-room and their large stock department are all in keeping with the general appearance of the studio. Going through them I could not help recalling many of the dingy, space-limited departments which in the United States are too commonly the workshops of our American photographers. Here space was not at a premium, and hence no necessity existed to encroach upon the size of other departments in order to provide for the reception-parlors and the posing-room. As to the elegance (and even luxury) of the Valletto reception-salon, I can do no better than refer to the photograph which appears in these pages. When I add that nearly every object in it is of great historic value, from the magnificent table which is a relic of the early days of Spanish rule to the exquisite inlaid floor that formerly adorned the castle of Maximilian at Chapultepec, it will be seen that few, if any, of our American studios can boast as beautiful a reception-room.

But in writing of the Valletto Brothers, I must bear in mind that, although photographers of the highest class, they are also art-lovers and connoisseurs of a rare kind. The collection of pictures and art-treasures, especially of an ancient style, is a hobby in which they all three indulge, and by the cultivation of this agreeable pastime they enable themselves to produce such photographic work as is clearly the outcome of minds trained in the worship of the beautiful. It is not too much, I think, to say that however capable a photographer may become in the posing, developing and printing sides of his work, and even in the comprehensive understanding of chemical formulæ, etc., he will never be a true master in photography unless at heart he is an admirer of what is beautiful in life and art.

The Brinkman Studios, or, as I found them to be called, the Alemania Galleries, were the next to be visited and their treasures inspected. Here again I met with such courtesy as confirmed me in my opinion of the Mexican photographers as a whole. As an instance of this, I may mention that the examples of Mr. Brinkman's work, which he had kindly consented to furnish, were not prepared in time to meet my departure from Mexico City, and were forwarded by him to Vera Cruz, where, unfortunately, they arrived too late to catch me before I sailed for Havana. I had, therefore, abandoned all hopes of receiving them, and had certainly not expected any further effort on the part of even so courteous a gentleman as the proprietor of the Alemania Studios. But in this I was to be agreeably surprised. Mr. Brinkman, not knowing my New York address, enquired of Mr. Crump, the president of the American Photo-Supply Co. in Mexico City, and solicited his good offices in forwarding to me the photographs he had promised. Thus it is that I am enabled to offer to the inspection of my readers samples of Mr. Brinkman's beautiful art.

Of these it is unnecessary for me to say that they represent admirably the best class of photographic work as it is practised to-day. Mr. Brinkman is the



PORTRAIT BY BRINKMAN, MEXICO CITY

deserved possessor of many gold and silver medals, and few who are acquainted with him and with his work would deny his talents as a master of the photographic art.

Besides the Brinkman and the Valletto Studios, there were others to be visited, and in each of them I was received in the same cordial manner and every possible assistance was rendered me in procuring the information I desired. Such names as Mora, Lange, Clark and de la Plata will always be associated in my mind with the very highest class of photographers. With Mr. Clark I had only a few minutes of conversation, and that in the company of the Valletto Brothers and of Mr. Eichelman of the Seed Dry-Plate Co. The latter was demonstrating privately to the photographers the qualities of the Seed plate when

handled under certain exposures and with the suitable manipulation of the studio-screens in the Valletto Galleries; but he kindly interrupted his work to make me acquainted with the American photographer. In this way I came to hear of the Clark Studio and of the select patronage it enjoys. Situated in the pleasantest quarter of the city, it forms another of the art-attractions of the Mexican capital. Like most of these first-class studios, it is fitted with all the latest improvements for the making of photographs and providing for the comfort of its patrons.

I have elsewhere spoken of Mr. T. R. Crump, the president of the American Photo-Supply Co., and to write of photography in Mexico without making some mention of the educational work being done by this house would be to overlook one of the principal factors in the advancement of Mexican art. As sole agent for such well-known houses as the Eastman Kodak Co., the Bausch & Lomb Optical Co., the American Aristotype Co., the M. A. Seed Dry-Plate Co., the Rochester Optical Co. and the Nepera Chemical Co., not only in Mexico City, but for all the States of the Republic, Mr. Crump enjoys a position of considerable importance among the photographic fraternity in Mexico. He has built up an extensive business, with ramifications in all parts of the country, and, as a man of wealth himself, he is enabled to exert a very healthy influence on the profession as a whole. A more genial companion or a man of wider views on Mexican affairs it would, I am sure, be difficult to meet, and I shall always regard my visits to his private office as among the pleasantest incidents connected with my stay in the Mexican metropolis. He was good enough to show much interest in my proposed articles on "Photography on the Other Side of the Rio Grande," and has done me the honor to translate into Spanish a recent contribution of mine to a cotemporary journal of photography and to give it a prominent place in the October issue of his magazine, *El Fotografo Mexicano*, the only organ devoted to the interests of the photographer in Mexico.

Among the photographs given to me in Mexico City was an exquisite one of an infant, which I should gladly reproduce as an example of how successful the "artist" has become in his faithful portrayal of child-life; but, unfortunately, in its unmounted state it has become much soiled and crushed by handling and cannot be reproduced without showing these defects. I am unable even to mention the name of the "artist," as I failed to record it at the time; but when he reads this article he will see that his visitor has not failed to speak truthfully of the very beautiful work he accomplishes.

In connection with his studio — one of the smaller galleries on Plateros Street and in close proximity to that of Mr. Lange — I am reminded of the occasion on which this photograph was given to me, and the incident may be cited as a proof of the busy life of these Mexican photographers. I had called several times to obtain the specimen of work, and each time was put off with the truthful excuse that the "artist" was too busy to make the print, but with the assurance that on my next visit it would be ready for me. My final visit was on the eve of my departure from Mexico City, and, as it happened, the pho-



PORTRAIT BY BRINKMAN, MEXICO CITY



tographer was again unusually busy in his posing-room. He found time, however, to rush out, see who had called on him, snatch up the unmounted print and, handing it to me with his left hand, while he wrung my right with the other, he repeated at lightning speed: "*Dispense-me, mucho trabajo, mucho trabajo, a dios, a dios*" ("Pardon me, lots of work, lots of work, good-by, good-by!"). A comical fellow, inclined to be easily excited, but a good photographer and — a hard worker, a man of "*mucho trabajo*." Lucky fellow!

But they are all lucky, these kindly, talented photographers of Mexico City. With the true instincts of the artist, they are attached to their profession and have done their share in adding to the things that are beautiful and done well. They are especially lucky in that they labor in a beautiful city, with an ideal climate for the photographer, and where the skies are always blue. No one who has met them and been privileged to inspect their art-treasures can ever forget them and the work they are doing. If in my humble way I have made them known to their brothers on this side of the Rio Grande, I have not been the recipient of their courtesy "for nothing." From the distance of many hundreds of miles, I stretch out my hand and bid them the Spaniard's "*Salgan con bien!*"

*Quid est suavius quam rem gerere bono publico?*







C. J. VON DUEHREN

STUDY OF THE NUDE

## PHOTOGRAPHY AND THE ELECTRIC SPARK

G. H. NIEWENGLOWSKI

*Among the most interesting scientific experiments made within recent years, by the aid of photography, must be classed the action upon the sensitive plate of the passage of electric sparks. In this connection it is proper to state that Boston has been a centre of experiments of this kind, in view of the remarkable and well-known Kinraide productions. On this subject a very interesting article has been published, recently, in the "Annuaire Général et International de la Photographie," by G. H. Niewenglowski. From the paper of this well-known writer on photographic subjects we have translated a portion for the benefit of our readers, many of whom, no doubt, will be glad to conduct experiments along the lines suggested by him.*

**W**E must go back to the days of the wet-process to find the first attempts to reproduce, by photography, the path of the electric spark. Mr. Daft, a photographer of Troy, N. Y., was one of the first who obtained satisfactory results of the electric spark, as discharged from one pole to the other of a powerful Holtz machine. Dr. Stein experimented along these lines in 1883. He caused the electric spark to flash between the two poles of either an electrostatic machine or an induction-coil. He focused on the ground-glass of his camera the gap between the two poles,

so as to procure an image of sensitized plate by the plate being placed between the battery and the discharge coil. A little later the electric current was applied to the coil, and the image was obtained. The image was then developed in a solution of potassium cyanide, and the result was a very good image of the spark flashing between the two poles of the Holtz machine, as shown in the accompanying photograph. The image was then developed in a solution of potassium cyanide, and the result was a very good image of the spark flashing between the two poles of the Holtz machine, as shown in the accompanying photograph.

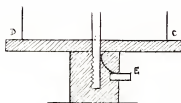


Fig 1.

with an electric source. A sensitive plate, introduced into the box, is impressed by each spark flashing between the poles H and N or between the table P and the knob L. One may substitute for the table P and the knobs L, H, N points or other bodies, at will. One may place the sensitive plate upon the table P, as has been done by M. Ducretet; viz., the dry-plate placed, film side down, on the table P, corresponds to the negative pole of an induction-coil. Above the plate was placed a thin ebonite disc, surmounted by a second disc and separated from the first by bands in a manner so as to leave an air-space between the two discs. On top of the second disc was placed a second photographic plate, film side up, and upon this a metallic disc corresponding to the table P and communicating with the positive pole of the induction-coil. In this way he obtained impressions from each pole in the form of a symmetrical figure. One may thus photograph, in natural size, the spark flashing between the two knobs H and N, communicating with the two poles of a Holtz machine, by placing upon the insulated table P a sensitive plate, emulsion side up.

The simplicity of this scheme further permits a variation of the order of the experiment, and one can thus obtain numerous interesting results. An account of the most important of these experiments may be found in Dr. Eder's work on "Instantaneous Photography." The form of sparks thus obtained varies indefinitely. A distinguished physician, Dr. Stephen Leduc, professor of physical biology of the School of Medicine at Nantes, to whom photography is indebted for numerous interesting and valuable researches, has recently pointed out several ways by which one is able to direct, at will, the course of the electric spark. One can thus, by the action of the electrical discharge upon sensitive surfaces, obtain a series of *motifs* for decoration that are extremely diversified, designs, which for beauty and variety rival those obtained with the kaleidoscope or those borrowed from the forms which nature presents to us.

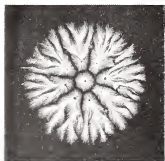


Fig. 2.



Fig. 3.



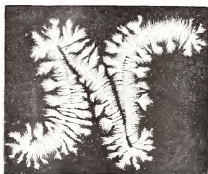
Fig. 4.

The controlled electric spark sets itself to ornament, in a most capricious and unexpected manner, the path that it is obliged to follow. For instance, it is possible to produce an infinite variety of rosettes (Figs. 2, 3 and 4) by employing one of the following methods described by Dr. Leduc, and which will enable those of our friends owning, outside of their regular photographic apparatus, an electrostatic machine or an induction-coil, to perform interesting experiments.

First, prepare a disc of cork on which place a thin sheet of lead. On a circumference stick eight ordinary pins, equidistant from each other and passing through the lead and the cork. In the dark-room the film side of a dry-plate has previously been sprinkled with a layer of powdered starch. This photographic plate is then placed upon a thin sheet of metal in communication with the outside of a Leyden jar belonging to a Wimshurst machine. The combined sheets of cork and lead are supported, stool fashion, by means of the pin-points above the sensitive surface of the dry-plate. This, the sensitive surface, is then put into communication with the outside of the other Leyden jar. It is then only necessary to discharge between the poles of the machine and to develop the dry-plate, acted upon by this spark.

Second, take a thin sheet of cardboard, which is to serve as a stencil in this experiment, and out of the centre cut, say, a six-lobed rosette or any other de-

sign. Place this cardboard stencil upon the film side of a dry-plate, and by means of a salt-shaker sprinkle some insulating-powder, such as flour, starch or sulphur. Then carefully remove the stencil, leaving upon the film side of the dry-plate the design, in powder, the rest of the plate remaining clean and smooth. One can vary the result not only by changing the patterns, but by scattering over the sensitive plate bits of tin, lead, copper, etc., cut in diverse shapes. The powders are the means of producing designs more or less refined, according to their fineness or density. The more compact powders yield the finer details, and one can obtain a greater variety of structural appearance by employing different powders differently distributed, and by employing different stencils. The photographic dry-plate, thus prepared, is placed with its glass side upon a sheet of metal in contact with one of the poles of an electrical generator. One



*Fig. 5*

can thus direct the discharge of the spark and, consequently, the results obtained, by means of the form of the sheet of metal. On the film side, in the centre of the symmetrical design formed by the powder, is placed a point in contact with the other pole of the generator. The results may be varied by changing the relative positions of the poles.<sup>6</sup> In the experiment, as thus arranged, the sensitive plate represents the dielectric of a condenser, of which the metal sheet and the point form the armatures.<sup>7</sup> Having made the electrical discharge, wipe the plate carefully with a dry cloth, so as to leave no trace of powder, and develop in the usual way.<sup>8</sup> For a generator one can use either a Ruhmkorff coil or a static machine; the smallest of generators will suffice. One can thus obtain designs of various forms; especially one can draw with the electric spark ornamental letters or words (Fig. 5). Cut the word out of a thin sheet of lead and place the latter upon a sensitized surface; according to the presence or the absence, or the nature of the powder, or, according as one powders before or after putting the letters on the sensitized plate, one obtains an infinite number of variations. One can thus use the actinic energy of the electric spark for the reproduction of all kinds of objects — all the details, even the most unimportant, including the scratches on the surface of the original, will be reproduced with remarkable fidelity. — *Translated by Wilfred A. French, Ph.D.*



R. DUHRKOOP  
THE SPIRIT OF CHRISTMAS



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## EDITORIAL DEPARTMENT

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### "A MERRY CHRISTMAS"

THE Christmas chimes are pealing, softly pealing; joyous sounds are ringing, ever louder and clearer, ever nearer and nearer, like a sweet-toned benediction falling on the ear. Glad ringers are pulling the ropes, and in one grand swell of melody, Christmas, with its old yet ever new and marvelous mysteries, bursts triumphantly upon the world once more.

"I do not know a grander effect of music on the moral feeling," says Washington Irving, "than to hear the full choir and the pealing organ performing a Christmas anthem in a cathedral, and filling every part of the vast pile with triumphant harmony. Beautiful and right it is that gifts and good wishes should fill the air like snowflakes at Christmas-tide. And beautiful is the year in its coming and its going — most beautiful and blessed because it is always the year of our Lord!"

This beautiful word-picture of the master of English prose is the embodiment of the spirit of Christmas-time. It represents the sentiment and feeling that should actuate us all at this season of the year. The PHOTO-ERA is glad to call attention again to its beauty and timeliness, and to wish all its readers "a Merry Christmas and a Happy New Year."

### THE ACADEMY

THE attitude of a certain small portion of the photographic press towards the Academy question reminds us of the story told by Elbert Hubbard of a young man who came to him with a proposition to establish a publication, the principal object of which should be to "knock" certain people against whom he had a grudge in a literary way. Among others, he cited the name of William Dean Howells as one of those against whom his efforts would be directed. "Well, what has Howells done to merit this treatment?" inquired the genial Fra. "Oh," replied the young man hesitatingly, "I really don't know; but he's too blamed successful." We think the Academy idea is too successful for some of our esteemed cotemporaries. The editor of *Wilson's Magazine* devotes fourteen pages of the November issue to a discussion of this question. In order to size up public opinion, in the professional world, on this subject, he formulated four questions on the advisability of such an Academy and submitted them to one hundred of the most representative photographers throughout the country. "Almost all of the replies received," we quote his own words, "were favorable to the idea of some such institution; but the significant fact should not be overlooked that amongst the replies received we do not find a word from such men as Strauss, Stein, Steichen, MacDonald, Hollinger, Garo, Parkinson or Pierce." This is certainly startling, but, in our opinion, in no way militates against the idea of an Academy. They are all busy men and possibly could not

find time to formulate their opinions, for the editor of *Wilson's Magazine*, on so important a subject. The worst that could be surmised from their silence is that they were reluctant to place themselves upon record in a matter of this kind, so far-reaching in its extent. We hasten to assure the editor of *Wilson's* that, with possibly two exceptions, the PHOTO-ERA has already received assurances from all of these gentlemen favorable to the Academy idea. Far from opposing the idea, we believe they will welcome its establishment, upon right lines, with open arms. With these facts in our possession, we submit that the assumption, made by the editor of *Wilson's*, that the silence of these gentlemen indicates that they oppose the idea is entirely gratuitous and unfounded. The objection that the Academy will create class distinctions in the profession is true in a measure, since the acknowledged leaders in photography would then be in a class by themselves, separate from the second and third rate men. But this is not an altogether unmixed evil, since everybody knows there are degrees of excellence in every profession, and no one will seriously object to this except those photographers who are afraid to come to a show-down and be measured by Academic standards. The only question of serious importance raised by our esteemed cotemporary in this discussion regards the place of the amateur in the contest for Academic honors. We believe that the committee will be fully equal to wrestle successfully with this problem when it is presented. On the whole, we also believe that the Academy idea has been advanced, and is in no way harmed, by the fourteen-page discussion in the November issue of *Wilson's Magazine*.

## WINTER PICTURES

WE have often wondered why photographers stick so persistently at home and forget the use of their cameras during the winter months. Occasionally we have snow scenes, after there has been a heavy fall of snow, taken in the suburban garden; but they are few in number and seldom of a quality to commend them especially to our attention. The weirdness and grandeur of the open country when buried beneath snow-drifts is seldom attempted. We make a plea for the winter photograph planned on this grander scale. Nobody knows the hills who has not seen them in winter. The difference between the summer and the winter landscape is very marked in point of grandeur and general impressiveness. There is lack of color, too, in the winter dress of Nature, but this adds to the facility of rendering such scenes correctly in the black and white tones of the photograph. Yet this very facility of rendering the winter landscape in monotone is dangerous for the photographer, as he is apt to indulge in too great extremes of black and white in his picture. The black should not be solid, but should contain a suggestion of transparency, and the whites, to escape being chalky, should favor gray tones. Ward Muir, an English photographer, tells us how moonlight snow scenes are sometimes produced. "Exquisite effects," he says, "are observable when the camera is pointed directly towards the sun. The rays falling on the rippling water and on the stretches

of snow on either side produce some very tempting lightings. Needless to say, the lens must be shaded while the plate is being exposed, to prevent a flare-spot. This straight-in-front illumination is of great use to those who yearn to produce moonlight snow scenes. All that is done is to print the picture rather darkly — there you are.”

## PLATINOTYPE

**P**LATINUM paper is probably more widely used to-day in the photographic world, for artistic effects, than any other single photographic paper. The ease with which it is manipulated, its absolute permanency and the beautiful results which it gives has endeared it to every artist photographer in the land. For this reason we regret to call the attention of our readers to the extraordinary advance in price of pure platinum throughout the world. *The Amateur Photographer* of London prints an advertisement in a recent issue, which reads as follows: “PLATINUM, 5£ 10s. per oz. now given for old platinum crucible scrap, etc. 500 oz. urgently needed during November.” The editor, commenting on this, says that if a chemist has occasion to buy platinum, for laboratory use, at the present moment, he will be fortunate if he obtains it at £8 or £9 per ounce. Indeed, at the present time there is practically a platinum famine, and no definite price rules, the real difficulty being to obtain the metal. The present condition of Russia is doubtless a factor in keeping down the supply, as much of the platinum now used comes from the Ural Mountains, but the most real factor in the rise is the increasing demand for platinum for technical purposes. Since the flooding of the platinum-mines in the Transvaal, in South Africa, which occurred soon after the breaking out of the Boer War, the price has risen steadily. Recently the German Reichstag has discussed a measure prohibiting the use of platinum in photography because it was absolutely essential in medicine and electrical work, while its use in photography was not a necessity. Fortunately, the measure was not passed, though it indicates the possibilities and what might happen in the near future to cripple the platinotype process in photography.

## HISTORICAL RECORD WORK

**T**HERE is no doubt that to a large extent the photograph takes the place, to-day, of the written record of events and experiences. The photograph is more reliable than the memory, more accurate than any record or recital, however eloquent the word-picture may be. The photograph entertains and it enlightens. It suggests and it recalls, not vaguely, but with a power akin to the subject of which it is the counterfeit presentment. The camera to-day has become a fascinating source of genuine pleasure. It enlarges our horizon. As a means of fixing events of historical value or of personal interest it has unlimited uses that are truly commendable and of priceless value to the historian. Every day, as time goes on, the photograph is coming to be recognized at its true worth in establishing historical records for the future.



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## THE ROUND ROBIN GUILD

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*Conducted by Elizabeth Flint Wade. Specially designed for the amateur photographer and the beginner. Membership may be obtained by sending name and address to the PHOTO-ERA.*

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"Ever by day and by night, under the sun and under the stars, climbing the dusty hills and toiling along the weary plains, journeying by land or journeying by sea, coming and going so strangely, to meet and to act and react on one another, move all we restless travelers through the pilgrimage of life."

And so we travellers have moved on through the year and reached another Christmas-time, the blessed halting-place where we can rest and give and take good cheer and be girded for the New Year which comes so soon. Best of all is the thought that this is the season that brings from far the wanderers back again to the old home. No other meeting is quite like that at Christmas, for we are all children at this special holiday, and filled with Christmas love toward all.

Dickens, who might almost be called the Apostle of Christmas, so loudly did he speak its praise, says that he began by mere accident to associate the Christmas time of year with human interest, and with some inquiry into, and some care for, the lives of those by whom he found himself surrounded; and quaintly remarks that he hopes he is none the worse for it, and that no one near him or afar off is the worse for it. That is the true spirit of Christmas—to take a personal and friendly interest in those around one, and especially those to whom the world at best is a weary place and a hard place. Give out of one's abundance and good cheer to those who are our fellow-passengers—all travelling the same way, all at last to reach the same goal. Then we shall really and truly know the meaning of the Christmas watchword,

"Peace on earth, good-will to men!"

Have you ever tried making trans-

parencies on Japanese tissue paper? The ready sensitized paper is not kept in stock, as it does not keep well, but one can order it and receive it in three or four days from the sending of the order. The paper is sensitized with platinum, and treated in the same way as a platinum print. The fiber is very tough, so there is no danger of tearing or injuring the print during the process of finishing.

A print made on Japanese tissue makes a most artistic banner lamp-screen. It has been my pleasure to view some of these, already finished and waiting for the morning of the auspicious twenty-fifth to appear as welcome Christmas remembrances. One picture is a garden scene. A young girl stands by a sun-dial in the midst of flowers. The detail in the print is very fine and shows up well against the light. The shadows are thrown into sharp relief and emphasize the motto which runs beneath the picture,

"Time passes like a shadow."

The print, as are all the others, is mounted on thin strips of wood which are covered with bands of ribbon about three quarters of an inch wide, the design being tiny pink roses, making a very appropriate border.

The second screen shows a Japanese looking picture. There is a scraggy group of trees in the foreground, and beyond, a long vista of road and a figure walking along it away from the spectator. The effect of distance is so marked one seems to be looking for miles, almost, and finds himself wondering what lies beyond the hills outlined on the far horizon. Beneath this picture are the words,

"Beyond the hills lies Italy."

A third screen is a blue print, but a blue such as one seldom sees in a photo-

graph. The Japanese tissue seems to give a peculiar transparency to the color, as well as great brilliancy. The picture is of course a marine, and seen against the light the waves seem actually as if in motion. The boat, a yacht, is speeding on its way as if all the winds of heaven were assisting it onward. The bands at top and bottom are of gilt, and make a pretty setting to the picture.

Another is a sunset picture, with wonderful cloud effects, and the ingenious artist has backed the picture with tissue paper of the softest rose-color, bringing it down to the horizon-line only, and the clouds and sky have a faint, delicate tint of pink, which is so often seen just before the light vanishes entirely.

These pictures have been selected with great care, and are designed to suggest some characteristic of the receiver. The first, the sun-dial, is for one who fritters away the time as if the moments were not golden and once gone could never be found again. The second is for a patient worker who has been toiling a long time, whose ambitions are great, but who often finds the way long and dreary. This picture is sure to be an inspiration. The blue print is for one who loves the sea, but whose life must be spent mostly on land; while the fourth is for an old lady whose last days are being tinged with rose-color, though her early life was stormy and rough.

Half the pleasure of a gift is in knowing that the giver has studied one's tastes, or one's characteristics, and has materialized this insight in the selecting of the gift.

These prints are quite inexpensive; the brass standard on which the picture is hung costs in the neighborhood of fifty cents. It is a gift that cannot be purchased for money, and one which will not be duplicated.

One cannot go astray if in considering what gift to choose he settles on a screen made after the fashion described.

One of the fancies of the present moment is for fancy lamps and ornamental lanterns. The latter are often made of hammered and punctured brass, and,

though expensive, are an attractive piece of furnishing for a dim or dusky corner of a hall, a library or a study. One of these lanterns in a square or box shape lends itself to further ornamentation by having cut in the centre of each side either a square or oval opening and fitting into it transparencies, either in black and white or in the colored slides in monotone. The colored transparencies are in monotone and are colored by the toning-process, and one may obtain innumerable variations of the four colors green, purple, brown and red. One may also use blue transparencies with excellent effect. Blue transparencies, if the subject is a water scene, are very attractive bits of photographic work, giving a bit of color while still retaining artistic value as pictures.

In cutting the opening for the transparencies pieces of the brass are left, and serve to hold the picture in place. The brass can be cut in one long sheet, hammered and punctured, and the openings cut for the transparencies. It can then be bent into shape over a square block of wood, and the free edges either soldered or else the edges punctured and put together with gilt wire woven through the holes.

An attractive variation of the lantern idea is to take four transparencies of equal size, bind the edges with ribbon and then sew the four together at the corners to make a box with neither top nor bottom. This is set over a small alcohol lamp and makes a unique ornament for the top of a bookcase.

Transparencies are so easy to make, for in the printing one is independent of sunshine, that the amateur can by taking a little thought devise many gifts along the lines suggested, and be certain that his Christmas remembrance will be gladly received and liked. Even though December wanes and Christmas day draweth nigh, there is time for the making of a number of "transparent" gifts. One evening only will be sufficient for the making of the transparencies, and mounting them is the work of spare moments caught in between more pressing duties.

An interesting gift is now on its way to the Island of Luzon, which is intended for the Christmas stocking of a young engineer spending his first Christmas away from home and from country. The "Gift" consists of a dozen 10 x 12 stout manilla envelopes, one for each month of the year, and the contents is chosen with special reference to the month in which the envelope is to be opened, for this is an "All the Year Round" present and is meant to stretch along through the months till Christmas comes again.

It would take too much space to describe — though the description would make interesting reading — the contents of all the envelopes, but one or two will serve for suggestions of what one could do in the way of making such a gift.

The July envelope contains a small American flag of silk, and a giant fire-cracker which, instead of one, has thirty-one fuses depending from it. A legend on the wrapper gives this advice:

"When you 've the blues  
Just pull a fuse,  
And gladness swift will come.  
It will not wait,  
But blow you straight  
Away to your old home."

When a fuse is pulled it brings with it a roll of paper on which is printed a home scene, or else a picture of some member of the family, and with it a jolly message from one of the loved ones. The flag is to be pinned on the wall and the "fire-cracker" hung below it.

The November envelope is labelled "the Thanksgiving Number," and in it are half a dozen pictures mounted on a folder which opens out full length and can be put up on the wall, or partly folded and set on the table or desk. It contains half a dozen pictures, each one representing some one performing a task which in his home days would be disagreeable to the young man when he was asked to perform it. Below them are the words,

"Give thanks that you don't have to do them."

One imagines that no present will give more pleasure than this which was prepared with plenty of time and forethought, but at very little expense.

## WORKING ON THE GLASS SIDE OF A NEGATIVE

A negative in which the contrasts between the lights and shadows are too strong to make an artistic print may be treated from the glass side with very satisfactory results.

Make a print from the negative as a guide to the work. Take a piece of clear tracing-paper or of onion-skin paper and attach it to the glass side of the negative by pasting slightly at the edges. The tracing-paper may be used dry, but if onion-skin paper is used moisten it slightly, lay it on the glass, rubbing out any air-bubbles between the glass and paper, then paste at the edges. When dry, the paper adheres closely to the glass without wrinkles.

With a soft retouching-pencil go over the negative and work up the detail in the shadows until by transmitted light they seem dense enough to print well. Make a proof, and if the work is satisfactory then with a crayon stump blend the lines and lighten the edges of the penciling where it is needed.

Instead of using the paper, the negative may be coated with ground-glass varnish, which gives a good tooth for the pencil. The formula is as follows:

Gum-sandarac .....	90 grains
Gum-mastic .....	20 grains
Ether .....	2 fluid ounces
Benzole .....	1½ fluid ounces

Flow this over the glass side of the negative, and when dry it can be worked on in the same manner as on the tissue paper. If the work is not successful the glass may be cleaned with spirits of turpentine and the process repeated. Blend the markings by rubbing with a powder made of one part very finely powdered resin and two parts dextrine. Use a leather stump for the blending.

In landscapes, where in order to obtain a print of the clouds in the sky the landscape itself must be very much over-printed, tint the ground-glass varnish with a little Prussian blue and apply to the glass side of the negative over the landscape, softening the horizon lines with the resin powder.

Benzole is highly inflammable, and while the formula calls for a small quantity only, it is safer not to use it near a light. Keep the solution in a well-stoppered bottle to avoid evaporation.

#### ROUND ROBIN GUILD COMPETITIONS

First prize: Value \$10.00.

Second prize: Value \$5.00.

Third prize: Value \$2.50.

Prizes may be chosen by the winner, and will be awarded in photographic books or magazines published or advertised by us; in enlargements, art portfolios of photogravures, mounts, or other photographic materials advertised by us; or, if preferred, we will send any article of a photographic or art nature which can be bought in Boston for the amount of the prize won.

#### RULES

Membership in the Round Robin Guild, with all its benefits — among which the correspondence privilege probably stands first — is free to all, and we invite every photographer to become a member. Entrance in the monthly competitions is also free to all, whether subscribers to PHOTO-ERA or not.

#### SUBJECTS FOR COMPETITION

November — "Harvest Scenes." Closes December 31.

December — "Snow Scenes." Closes January 31.

#### VIOLET-TONE SENSITIVE PAPER

For some purposes of decorative photography a violet tone is specially pleasing. French photographers have experimented until they have perfected a process for making violet-tone sensitive paper of very delicate tints, the prints resembling wash-drawings.

Rives or any good photograph paper is coated with a solution made as follows:

Hydrochlorate of ammonia	.....1 ounce
Rock candy	.....1 ounce
Water	.....20 ounces

Heat some of the water and dissolve the rock candy in it, then strain or filter to remove all impurities. Dissolve the hydrochlorate of ammonia in the remain-

der of the water and mix the two liquids. Test it for acidity with a piece of blue litmus paper, and if it turns it red add a few drops of ammonia until the bath is neutral, which is shown by the paper remaining unchanged in color when dipped in it.

Turn the solution into a porcelain tray and float, one at a time, the pieces of paper to be sensitized, having previously cut them into a size a little larger than the negatives from which prints are to be made. This is the salting-solution. The sensitizing-solution is made of one ounce of nitrate of silver and eight ounces of water. When the salted paper is dry, sensitize by floating in the nitrate of silver solution and pin up to dry in a dark room.

This is a printing-out paper, and the printing should be carried as far as for Aristo prints, as the color bleaches out in the toning-process.

These prints may be toned in a combined bath or in a gold bath, and then fixed. Before placing in the toning-solution the paper is first placed in an ammonia bath, ten drops of ammonia to twenty ounces of water. The paper is just moistened in this bath, then washed in three or four changes of water, and toned to the desired color, leaving prints in the toning-bath until they have a deep purple tone in the shadows and a creamy white in the high lights.

After the prints are washed drain them well, and before they begin to dry coat them with a mixture made of equal parts of the white of egg and water. Use a soft brush and see that all parts of the print are brushed with the albumen. If prints are dried without this coating they dry a dull color and often have a muddy appearance.

Another process is to sensitize the paper after salting with a solution made of twenty-eight grains of nitrate of uranium to an ounce of water.

This is a developed paper, so one must make a print on a printing-out paper, timing the length of exposure for a good print, then expose the uranium sensitized paper the same length of time. Wash the print in warm water — about 120° F. —

then lay face up in a tray and flood with a solution made of two grains of chloride of gold to each ounce of water. When the detail is well out, and the color a rich violet, remove from the tray and wash in running water for an hour or more.

Tinted prints, or prints made on tinted paper, are suitable for the first leaf of a book of photographs, for decorating calendars, for bookmarks, etc. They are not designed for portraits, landscapes and such photographic work, but often a flower negative printed on a tinted paper is very attractive.

One always likes to vary the regular routine of any work, and a little experimenting with tinted paper will prove a pleasant pastime.

#### ANSWERS TO CORRESPONDENTS

WALTER G.—In purchasing a camera the size selected depends altogether on the kind of work one means to do with it. The larger the camera the more expensive the plate, which is a point to be considered. If you are simply going to do hand-camera work, hoping, as you say, to be able to do some work for the press, then the 4 x 5 camera will be quite large enough. Learn to use it mechanically, so that your mind may be directed to the subject and not to the manipulation of the camera. A 4 x 5 picture can be enlarged in case there should be a necessity for a larger picture. This you could do yourself, or the plate would be sent to the office of the paper and the enlargement made there. If you are quick of hand and eye, and not easily discouraged, you ought to be able to make a camera pay well after a few months of practice.

HAROLD K.—Platinum prints properly developed and finished are permanent. Of course carbon takes the precedence as to permanency, but platinum prints are practically permanent if the print is well bleached and then thoroughly washed to free the paper from the unused chemicals.

M. L. T.—Perhaps you are using too strong developer in the making of your bromide prints. Use the developer diluted, making the development progress more slowly, and you will get good prints even

if the exposure has been a little too long. The trouble with the strong developer is that the picture comes up so quickly that it is overdeveloped before it can be taken from the solution and transferred to the hypo bath to stop the blackening. It is also a good plan to use a very little bromide of potassium, a few drops of a ten per cent solution, in the developer. This restrains the action somewhat and permits of detail being brought out more clearly. Salt also acts as a restrainer, using what can be taken up on the point of a knife to four ounces of developer.

G. L. HENRY.—Directions for making enlargements have been published in former numbers of the PHOTO-ERA. If you wish, these numbers containing the articles will be sent you. Clear your nitrate of silver solution by filtering, for sometimes the ammonia will not clear the liquid. An excess of ammonia will spoil the action of the solution.

SHELDON F.—Your solutions have oxidized by being exposed to the air. This often happens and can be prevented if you will take the precaution of pouring a little melted paraffin wax over the cork and top of the bottle. This excludes the air and the solution will keep without discoloring.

G. H.—You will find an article in PHOTO-ERA, January, 1904, on the subject about which you wish information, "Illustrating with the Camera." This goes into detail and will give you many suggestions about utilizing your pictures and also in making new ones. The magazine will be sent on receipt of price.

HELEN B.—Ortol is a fine developer for velox or bromide prints. It will not discolor nor poison the hands. In using it for the developing of negatives it imparts a reddish color to the film, which adds to the printing-qualities as does pyro, which stains the film yellow.

ARTHUR DWIGHT.—You are evidently using solutions too cold and that is the reason of your unsatisfactory negatives. Developing-solutions should never be below 65° F., and a few degrees warmer gives better results than to use a solution as low as 65° F.

# The Crucible

## BORIC ACID FIXING-BATH

According to M. Reep, a good acid bath can be made by dissolving six ounces of hypo in fifteen ounces of warm water, adding one ounce of boric acid, and making up to twenty ounces with water. Plates or paper fixed therein must not be acid or contain alum, or sulphur will be precipitated.

## WHITE INK

A good white ink for putting titles on dark mounts may be made by mixing oxide of zinc or sulphite of barium in gum water to a convenient consistency for use.

## DETERMINING THE NATURE OF PRINTS

It is at times difficult to distinguish some bromide prints from those on platinum. The matter can be settled, however, by trimming a tiny strip from the print and immersing it in a solution of mercuric bichloride. If the image disappears the print is a bromide, but if it remains unaltered the print is a platinum.

## A SINGLE SOLUTION INTENSIFIER

A good one-solution intensifier which is simple and gives excellent results may be prepared in accordance with the following directions. Make three solutions:

### A

Mercuric Chloride ..... 60 grains  
Water ..... 1 ounce

### B

Potassium Iodide ..... 90 grains  
Water ..... 2 ounces

### C

Hypo ..... 120 grains  
Water ..... 2 ounces

Add A to B and shake. Then add C, which dissolves the red precipitate first formed, and leaves a clear solution. The plate is to be immersed until it acquires sufficient density, and is then to be well washed.

## INTENSIFICATION

*Photographic Scraps* suggests that sulphide of soda should be used as a "blackener" after bleaching with mercuric bichloride, in preference to ammonia, on account of the probability of greater permanence. Apart from the question of permanence, ammonia usually gives a very objectionable harshness and should be avoided unless the negative originally was extremely thin.

## PRINTS FROM WET NEGATIVES

It sometimes happens that emergency demands the production of a print in the shortest possible time. On such occasions it may be useful to remember that bromide prints can be taken from wet negatives. After the final washing, negative and bromide paper are inserted in clean water and brought into contact, air-bubbles being carefully squeezed out. The exposure is then made in the usual way, and the wet paper peeled off the negative and developed. After fixing and washing, the print may be dried expeditiously by immersing for five or ten minutes in methylated spirit. For press photographs and prints not required to be permanent, fifteen minutes spraying with running water will serve as a final wash after fixing.—*Focus*.

## STAINED NEGATIVES

M. Haudet recommends the following clearing-bath for negatives stained by pyro or other developers:

Alum ..... 15 grams  
Ferrous sulphate ..... 45 "  
Citric acid ..... 15 "  
Water.....300 c.c.

The fixed and washed negative is soaked in this solution, a near equivalent of which was used quite in the early days of the gelatino-bromide process, and when the tint or stain is removed all that is necessary is to well wash the plate.

# SILVER STAINS ON FILM

When a great many prints have been taken from unvarnished negatives, or negative or printing paper has been exposed to dampness while in the printing-frame, the negative will develop hundreds of rust-colored spots. These are silver stains and are not easily removed. One method is to immerse in the following:

Potassium iodide..... 1 ounce  
Water .....10 ounces  
Iodine.....10 grains

When the stains are almost invisible by transmitted light, transfer the film to a weak (one in ten) hypo bath for a few minutes. Then wash well, and, if they have not all gone, repeat. This is the best remedy we know of, but it is not infallible.

## VARIED TONES ON CHLORO-BROMIDE PAPERS

Slow development, or chloro-bromide, papers like Velox have the useful property of giving a variation of tone with the variation in exposure. The scale starts with greenish-black, passing through black, warm black, brown, sepia and blood-red to yellow; the shorter the exposure and the more energetic the developer the more the tone tends towards black. The table below gives the various tones obtained with different exposures and different strengths of developer,

but if the tone is not as desired the print is by no means useless.

Now, to obtain with certainty the desired tone the exact exposure required to give black tones should be found by trial and error, and then it is only necessary to alter the time of exposure and the developer according to the table.

The developers for these papers should always contain potassium bromide, the absence of which causes fog. This is possibly the cause of the non-success of some amateurs with this class of paper. The best developers are hydroquinone and edinol; the others do not enable such a variety of tones to be obtained.

For hydroquinone the following should be used:

Boiled water ..... 1,000 C. C.  
Sodium sulphite (cryst.) .... 125 gr.  
Hydroquinone ..... 15 gr.  
Sodium carbonate (cryst.) ... 250 gr.  
Potassium bromide ..... 10 gr.

And for edinol:

Water..... 1,000 C. C.  
Acetone sulphite (Bayer) ... 50 gr.  
Edinol..... 10 gr.  
Sodium carbonate (cryst.) ... 35 gr.

By adopting this method of working, identical results are obtainable every time with the greatest ease.—*Leopold Lobel, in The British Journal of Photography.*

(Tone of the dry print	Exposure	Hydro. devel. to be diluted with	Edinol to be diluted with
Blue black	Normal	undiluted	8 parts water + 0.3 potass. carb.
Green black	Normal	5 parts water	9 parts water.
Olive green	Twice normal	5 " "	
Sepia	Three times normal	10 " "	9 parts water + 0.3 part conc. sol. of acetone sulphite or 0.15 dry acetone sulphite.
Brown	Four times normal	10 " "	
Red Brown	Six times normal	20 " "	50 parts water + dry acetone sulphite 0.5 part.
Yellow brown	Eight times normal	20 " "	
Blood red	Nine times normal	30 " "	
Red orange	Ten times normal	30 " "	
Yellow	Twenty times normal	40 " "	

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# The Filter

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## NOT UP TO LABEL

Professor Brander Matthews, the chairman of Mr. Carnegie's movement towards the simplification of spelling, was talking recently about exaggeration, says an exchange.

"We are too prone to exaggerate," he said. "We exaggerate in our advertisements. We exaggerate in our trademarks and labels. Is a ninety-horse-power engine really as strong as ninety horses?" Professor Matthews laughed.

"I entered, one night," he resumed, "the study of a friend of mine. He sat at his desk writing. An electrolier on the desk top gave a fair light, and beside it flamed a large wax candle.

"Why are you burning that candle there?" I asked.

"Well," said my friend, "I know the electric light is sixteen candles, but you've no idea what a difference the seventeenth makes."—*Exchange*.

## QUERY

"An answer to this problem  
Is what I greatly wish:  
Does fishing make men liars?  
Or do only liars fish?"

The inference one must draw from this little verse is plainly a libel on the sons of Izaak Walton, for everybody who has met these genial gentlemen knows that their word would carry more weight in court than that of any bunch of business men who never fish who could be brought before the jury.

## THE SAME EITHER WAY

"I don't see why they are making so much fuss about this new way of spelling," remarked Rear-Admiral Brownson after the naval review.

"No," replied Admiral Evans, thoughtfully; "it will be just as warm, probably, with one *I* as with two."

## SOMEBODY'S BLUNDER

"I want to complain of the flour you sent me the other day," said Mrs. Newliwed, severely.

"What was the matter with it, ma'am?" asked the grocer.

"It was tough. My husband simply would n't eat the biscuits I made with it."—*Philadelphia Ledger*.

## JUST FOR FUN

A liveryman hired an Irishman, who had just arrived from the green-tinted isle, and set him to work whitewashing a fence.

Late in the afternoon he passed Pat working away as if all the furies were after him.

"What's the matter, Pat? You seem to be in a hurry," he said.

"Sure and I am," replied the Irishman, as he exhibited a bucket almost empty, "I've got to finish this job before me paint runs out."—*Rochester Union Advertiser*.

## A FABLE

A duck which faithfully stuck to business during the summer and laid several dozen of large fawn-colored eggs complained that she was n't appreciated. "See that hen over there," said the duck; "she has n't laid as many eggs as I have, nor as big, but she has books written about her and verses composed in her honor, while nobody is saying a word about me."

"The trouble with you is," said the wise rooster that was standing near, "that you don't tell the public what you have done. You lay an egg and waddle off without saying a word, but that sister of mine never lays one without letting every one in the neighborhood know about it. If you want to cut any ice in this community you must learn to advertise."—*Exchange*.



## NOTES AND NEWS

### THE PHOTO-ERA FOR JANUARY

It is well known that the monthly magazines put forth their best effort to make the December issue the star issue of the year, and the favorite monthly, whether it appeals to the general reader or to woman or child, then appears in sumptuous holiday attire. But equally noteworthy is the fact that the issue following the Christmas number represents a striking falling-off as regards outward appearances and contents. What is to account for this sudden change? Contrary to this customary anticlimax in monthly publications, the PHOTO-ERA expects to astonish its readers by following the opposite course. The January issue will, therefore, unless some unforeseen obstacle arises, contain articles of exceptional interest. As this issue will be devoted, primarily, to mountain scenery, there will be illustrations never before seen in any photographic magazine. By special arrangements with Vittorio Sella, we shall be enabled to favor the readers of PHOTO-ERA with striking views taken among elevated mountain ranges, which, for technical perfection alone, have never been equalled by any photographer, past or present. Among the exceptionally rare and beautiful views with which we expect to favor our readers are Mt. Ushba of the Caucasus range, and a majestic aspect of a group of Alpine peaks of the Pennine range, comprising the Gabelhorn, Alphubel and Kimpfischhorn. Another sublime group includes Monte Rosa and the Lyskamm. Another view, made under extraordinary difficulties, represents crevasses on Glacier Blanc, Grande Sagne and Les Ecrins, in the Alps of Dauphiny. The general view of the Maerjelen Lake, in the Swiss Oberland, is one of uncommon beauty and effectiveness.

There will also be an article of unusual interest by Louis J. Christie on the Hallett Glacier, with numerous striking photographs by the author. It may be well to add, here, that the Hallett is one of the only two glaciers within the borders of the United States.

In the astronomical world, at the present time, the lectures on "The Canals of Mars," by Professor Lowell, Director of the Flagstaff Observatory in Arizona, have created widespread interest, and it is, therefore, with rare pleasure that we are privileged to announce a series of articles on this thrilling topic. The first of these articles will form another interesting feature of the January issue. These are written by no less a world authority on astronomical subjects than John Ritchie, Jr., of Boston. There will be accompanying photographs, made under the personal direction of Professor Lowell, which will materially enhance the value and interest of these Martian articles by Mr. Ritchie. In addition to these special features, the issue will contain the usual number of instructive articles on technical photography, and the va-

rious departments will be filled with timely and helpful suggestions.

### THE AMERICAN ANNUAL OF PHOTOGRAPHY

REGULAR and punctual is the appearance of "The American Annual of Photography and Photographic Times Almanac." We have at hand the issue for 1907, which is quite up to the high artistic and literary standard so well known to the photographic fraternity of this continent. Every well-informed worker must realize the difficulty encountered by an editor of a photographic publication in amassing good material. This has never seemed to be an obstacle in the issuing of "The American Annual of Photography," for the contributed articles are well chosen and certainly are up-to-date in their application to the various needs of the faithful worker. In scanning the present volume we note a number of valuable hints, foremost among which is a simple but obviously valuable suggestion on "How to Prevent Double Exposures," written by William Archibald. An equally short but useful article is by Albert Stanley Hull, on "A Simple Enlarging-Apparatus;" still another, "Chemicals for Paper *versus* Chemicals for Plates," by Milton Punnell; Russell W. Taft writes instructively on "Flash-light Portraiture." A simple dark-room light is explained by Richard Hines, Jr. The papers dealing on various subjects of photography, scientific, artistic and technical, number nearly half a hundred and are certainly worthy of being read by experts and beginners alike, for their authors are nearly all workers of high repute.

The same is true of the illustrators, among whom we recognize many familiar names, such as Jeanne Beunett, W. & G. Parish, Hana Robison, Dr. Schufeldt, Louis Fleckenstein, H. B. Conyers, William H. Zerbe, Myra Wiggins, Eleanor W. Willard, W. H. Porterfield, Mrs. W. W. Pearce, R. Duchkoop, Fedora E. D. Brown, R. E. Weeks, Edith H. Tracy and Dr. Albert R. Benedict. The frontispiece, made on Studio Cyko paper, is a masterpiece in lighting and pose.

There is the customary collection of tables and formulae, revised to date, and all of constant use to the painstaking worker.

The volume is sold at the usual price: paper cover, \$1.75; bound in cloth, \$1.25, the sole sales-agent being Geo. Murphy, Inc., New York City.

### PHOTOGRAMS OF THE YEAR

PHOTOGRAMS for 1906. Tennant & Ward, New York. Cloth, \$1.50; paper, \$1.00.

We hail with pleasure the arrival of "Photograms" for the present year. In form and general make-up this popular English annual pre-

## NOTES AND NEWS

sents the familiar features of preceding issues, and the excellence of its articles and illustrations is quite up to the lofty standard attained in 1905. Indeed, it is quite impossible to resist the temptation to allude to this sumptuous and attractive volume except in terms of sincere admiration. The editors and publishers have united their labors with sympathetic and intelligent understanding, yielding a work full of pictorial interest, as well as technical and historical value.

Although published annually, "Photograms of the Year" is not a photographic annual of the style and character of the well-known American publication, but is devoted to a review of the pictorial activity of the craft during the past twelvemonth.

The Table of Contents comprises: "Pictorial Photography in America," by Roland Rood; "Pictorial Photography in Canada," by H. Mortimer Lamb; "Notes from Australia," by A. Hill Griffiths; "The Year's Photography in Spain," by M. Mendez Leon; "Western Workers in the United States," by Fayette J. Clute; "The Work of the Year; Artistic Progress in France," by Robert Demachy; "The Two Great Exhibits (The Salon and the Royal)," by A. C. R. Carter.

This is simple fare, but wholesome and satisfying, and in quality unsurpassed. The descriptive subjects are treated sanely and in an attractive manner. Roland Rood will startle many American readers, for he upsets many pet theories regarding the artistic standing of eminent Photo-Secessionists, and among the photographic elect very properly includes several of America's foremost workers, such as J. H. Garo, H. H. Pierce, E. W. Histed, W. M. Hollinger, Pirie MacDonald, Elias Goldensky, Dudley Hoyt and J. C. Strauss. It might be well to state, at this juncture, that the above-mentioned workers are full-fledged professionals and in a class by themselves. Their best productions—and these portraitists do not pretend to turn out a masterpiece every day—are in many instances before the artistic ability of the idolized extremist, who, despising the cumbersome but efficient apparatus of the successful professional, tries to put into tangible form a few ill-conceived ideas by means of inadequate working-tools. To be sure, there is among the vast army of professional camerists, in this and every civilized country, scarcely a handful of real artists; but these are industrious and successful workers, who, under favorable conditions of time and mood, will produce portraits of such remarkable beauty and strength as to completely outclass the best amateur work in this line.

Sticking, as he must, to his bread-winning studio, the strictly professional worker cannot compete with some of the more favored amateurs excelling in genre work and landscape.

The latter class is effectively represented in "Photograms for 1906," and foremost among these delightful pictorialists, who understand the proper place of figures in the picture, stands Alexander Keighly, with his notable creation, "The Bridge," which, for keen artistic perception and broad and effective treatment, denotes creative genius of a very high order. A very similar subject, ably handled, is contributed by Robert Demachy. The figure study, "The Cape Malay Laundry," by Mrs. Caleb Keene, is a master-stroke. F. Benedict Herzog contributes a series of female groups, executed in his well-known masterly manner, and which exquisite decorative style he has made quite his own. A picture quite out of the ordinary, because it is the first artistic treatment in any form that we have ever seen, is a *motif* in the notoriously unattractive Trafalgar Square, by Alvin Langdon Coburn.

We have not the space to enumerate the artistic gems which embellish this remarkably attractive volume, but it may be sufficient to give the names of the most distinguished contributors: Alexander Keighly, Percy Lewis, A. Horsley Hinton, J. M. Whitehead, Sidney A. Pitcher, Dr. C. F. Grindrod, W. A. Stewart, C. J. von Duhren, Jas. C. Batkin, Chas. Job, Paul Pichier, W. R. Bland, J. Craig Annan, Wm. Rawlings, J. Kauffmann, Fred. H. Evans, H. Walter Barnett, Aubrey Harris, Henry Hall, C. J. King, Fred. Judge, C. F. Inston, E. O. Hoppé, Harold Holcroft, W. Smedley Ashton, C. Puyo, Bertram C. Wickison, Gino Belotti, Archibald Cochrane, Miss Bessie Stanford, Reginald Craigie, R. Duehrkoop, W. R. Bland, Emily Pitchford, Mrs. E. W. Willard, Mrs. G. A. Barton, Richard Speaight, Viscount Maitland; and, representing the American pictorialists: Alvin Langdon Coburn, F. Benedict Herzog, Eduard Steichen, Mrs. Jeanne Bennett, Lewis Fleckenstein, Alfred Stieglitz, F. H. Pratt, Wm. H. Zerbe, J. C. Strauss, Dudley Hoyt, Curtis Bell, Mrs. Gertrude Kaesebier, W. T. Greatbatch, Mrs. Hana Robison, Rudolf Fickemeyer, Thomas A. Morgan, Pirie MacDonald, Arthur Hewitt and O. V. Lange.

### EXHIBITION OF MISSOURI CAMERA CLUB

THE members of the Missouri Camera Club held their annual exhibition November 12-14, at the Y. M. C. A. Building, St. Louis, Mo. The artistic success of the exhibition shows that the camera, in the hands of a skilled operator who possesses a degree of artistic perception, becomes as effective in the reproduction of nature as the pencil or brush of the painter.

Of the 300 pictures hung, all were the work of members of the club. The judges, Robert E. W. Bain, Henry Stark and F. D. Healy, expressed themselves as much impressed by the showing made by the club, declaring it was

## NOTES AND NEWS

equal to that of any collection they had ever seen.

The prizes were awarded in the fourteen different classes as follows: Landscape — F. S. Ives first, W. M. Hand second, Charles Lindenschmit third. Animals — Charles Lindenschmit first, T. W. McClelland second; no third prize. Portraits — T. W. McClelland first; only one prize awarded. Snow scenes — T. W. McClelland first, W. H. Hand second, Charles Lindenschmit third. Still life and flowers — Charles Lindenschmit first, J. P. Maxey second, Edward Brown third. Statues and monuments — Charles Lindenschmit first, T. W. McClelland second; no third prize. Marine and water — T. W. McClelland first, Charles Lindenschmit second, W. M. Hand third. Architecture — T. W. McClelland first, J. P. Maxey second, Edward Brown third. Street scenes — T. W. McClelland first, M. Hollingshead second, Edward Brown third. Motion — T. W. McClelland first, F. S. Ives second, Charles Lindenschmit third. Child studies — T. W. McClelland first, F. S. Ives second, Edward Brown third. Interiors — T. W. McClelland first, Edward Brown second; no third prize. Miscellaneous — M. Hollingshead first, W. M. Hand second, Charles Lindenschmit third. Groups — T. W. McClelland first, M. Hollingshead second; no third prize.

### R. DUEHRKOPF'S NEW STUDIO

ADMIRERS of the work of that eminent German professional photographer, R. Duehrkoop, a few excellent specimens of whose work are reproduced elsewhere in these pages, will be interested to know that Herr Duehrkoop has just opened a new studio in the leading thoroughfare of Hamburg. An unusual feature is found in the fact that, although the apartments are handsomely decorated and furnished with reference to the purpose intended, they are ordinary rooms with the usual amount of light found in a residence and no top-light whatever; time-worn accessories are conspicuous by their absence — a fact much to be commended. It is in rooms such as these that Herr Duehrkoop produces the strong and thoroughly individual examples of portraiture such as are found in this issue, and the fact causes us to wonder if many photographers in this country might not utilize their studio rooms to better advantage.

### A PHOTOGRAPHIC TRIP IN THE TROPICS

THE Milton Waide Metropolitan School of Photography, Inc., 32 Union Square, New York City, is expecting to have a class leave New York the latter part of January, 1907, for the delightful tropic island of Porto Rico; return due in New York the first week in March. The class is positively limited to twelve in number, and the outing will not only be a delightful

trip, giving over three weeks in this most beautiful isle of the West Indies, covering every important place of interest, including a trip of eighty-eight miles by coach over the old Spanish military road, also another trip of thirty-eight miles on the new military road from Ponce to Arecibo, but will also be a very complete and exhaustive course of personal instruction in ideal and individualized outdoor photography. The school will give the entire trip under the auspices of one of its directors and instructors, one who has spent several weeks in Porto Rico, on a previous trip, and knows the ground thoroughly. The price is \$350 per person, and includes all travelling expenses to and from and while in Porto Rico; also personal instruction of the highest order in out-of-door photography, and one week's instruction at the school, after returning to New York, in ideal plate and film development and the successful manipulation of Vclor and Platinotype papers. For further particulars, address the school. If interested, it is necessary to act quickly, as the number is positively limited to twelve (eleven persons and the instructor).

### A UNIVERSAL PHOTOGRAPHIC EXHIBITION

A UNIVERSAL Photographic Exhibition is to take place in Dresden from May to September, 1910. It will not be confined to photographic productions (pictures of artistic and scientific character) and the diverse kinds of utensils and requisites; it is intended to afford a comprehensive view of photographic art industry to its full extent. The making of cameras, the working of optical and graphical establishments (for heliogravure, phototype, rotary reproduction), etc., will be shown in full work on the premises.

The interest of public authorities has been secured for the exhibition, and distinguished specialists as well as reputed firms in Germany and abroad have promised their support. The coöperation of photographers' associations and photographic periodicals of every country will be invited to contribute, that the great object in view, a complete representation of photography, may be successfully attained.

The management of the undertaking has been intrusted to the German Photographers' Association (located in Weimar), which is engaged with the preliminary arrangements, in union with the Dresden Society for the Promotion of Amateur Photography, and a considerable number of manufacturers and dealers.

### ERRATUM

WE regret that there was an error in the article on "Kallotype Printing," by James Thompson, published in our October issue. In the formula for the developer, given on page 231, "one dram" of oxalic acid should read "one gram."

## THE SOCIETY OF COLOR PHOTOGRAPHERS

At the invitation of Mr. H. J. Comley of Stroud, Gloucester, a meeting was held, on October 16, at the offices of the *British Journal of Photography*, London, England, to consider the formation of a society devoted to color photography. Those present included Edwin T. Butler, T. Bolas, E. J. Wall, Sidney L. Young, S. G. Yerbury, A. Macpherson, A. J. Newton, E. R. Grills, C. E. K. Mces, George E. Brown, Henry J. Comley, H. Snowden Ward, F. T. Hollyer, W. E. Dalden, S. G. Kimber, Charles B. Howdill and Bertram T. Hewson. On the proposition of Mr. George E. Brown, seconded by Mr. E. J. Wall, Mr. Snowden Ward was voted to the chair.

Letters and telegrams were read by H. J. Comley from many persons interested in color photography who could not be present, including such men as Dr. Grün, Dr. Hutchinson, Dr. Jumeaux, Mr. O. Pfenniger, Mr. Sanger-Shepperd and others.

Mr. H. J. Comley was elected secretary and treasurer, and a committee was also elected to draw up a circular stating the objects and methods of the society. The committee, which consisted of Messrs. E. J. Wall, Geo. E. Brown, F. T. Hollyer, A. J. Newton and the secretary, have since drawn up the following propaganda and rules, which will be placed before the next meeting of the members, on November 15.

### RULES

(1) *Title*.—The society shall be called The Society of Color Photographers.

(2) *Objects*.—The objects of the society shall be to further the progress of color photography.

(3) *Membership*.—All interested in color photography are eligible to membership.

(4) *Nomination*.—Ladies and gentlemen are admitted to membership on the nomination of a member, or upon their own application. The committee shall decide any question as to eligibility.

(5) *Subscription*.—The subscription shall be 5s. per annum, payable on admission. Subsequent subscriptions shall be payable in advance on January 1 in each year. The subscriptions of members joining after October 1 shall be considered as paid up for the following year. No member shall be entitled to any of the privileges of membership if their subscriptions shall be three months in arrears.

(6) *Meetings*.—Ordinary meetings shall be held from time to time, fourteen days' notice of which shall be given by the secretary. The committee may call extraordinary meetings as they may think advisable. At the annual general meeting, which shall be held in October in each year, a balance-sheet shall be presented, and officers elected, and any other business that

may require the decision of a general meeting. Special general meetings shall be called within fourteen days of the receipt by the honorable secretary of a requisition signed by five members, stating the purpose of the meeting; and no subject shall be discussed thereat but that for which the meeting was called.

(7) *Alterations of Rules*.—Alterations of the rules shall be made only at the annual general meeting or a special general meeting. The alteration proposed shall be stated in the notice convening the meeting.

(8) *Officers*.—The officers of the society shall be a committee of four members, a treasurer, and secretary. The officers shall retire annually, but shall be eligible for re-election.

(9) *Books of Account*.—Proper books of account shall be kept by the treasurer, and a book of minutes shall be kept by the honorable secretary.

(10) *Rules*.—The payment of a subscription by a member shall be taken as indicating acquiescence in these rules.

The Activities of the Society are:

(a) The mutual interchange of ideas and experiences in color photography by means of a circulating portfolio of specimens and MSS., which shall include questions and replies. This portfolio shall be circulated every three months, and shall not be retained by any member longer than five days.

(b) To obtain for members assistance by correspondence from more experienced workers, through the medium of the honorable secretary.

(c) To hold an annual exhibition in London, open to members and non-members, at the time of the general meeting.

(d) To form a permanent collection of specimens, apparatus, etc.

A most cordial invitation to join the society is extended to all who are interested in the advancement of color photography; membership is not confined to practical workers. Nomination forms may be obtained from the honorable secretary, Mr. Henry J. Comley, Surrey House, Stroud, Gloucester.

## THE PRACTICAL PHOTOGRAPHER

THE lantern-slide season is now with us, a time when nature does not usually in this climate give us as many photographic opportunities as in summer. It is natural, therefore, that the photographic worker should take up printing from negatives developed during the vacation season, and making lantern-slides with which to pass the long winter evenings. We would call the attention of readers who are interested in this work to No. 11 of *The Practical Photographer*, which furnishes an excellent manual on all phases of the subject, including a thorough treatment of spotting, toning, binding, coloring, printing-in of clouds and other practical pointers. The price is 25 cents, post-paid.

## NOTES AND NEWS

### OPENING OF THE DAGUERRE MEMORIAL INSTITUTE TO THE WORLD

PROMOTING THE HIGHEST ADVANCEMENT OF  
PHOTOGRAPHY IN AMERICA

At Winona Lake, Ind., one of America's greatest Chautauqua Assemblies, a monumental building has been erected and dedicated to the honor of Daguerre and to the preservation of gems and works of the masters of photography. In this salon, the only one perhaps of its kind in the world, are now assembled several thousand dollars' worth of photographic masterpieces, to which it is the pleasure to add others from time to time, that it may become of recognized authority, be far famed, and known as one of the world's greatest photographic salons. This salon is now not only bidding to be known as one of national reputation, but foreign nations are clamoring and seeking to know its meaning.

That the fame of this Institute may grow more bountiful and become one of acknowledged merit; that the general knowledge may be advanced and assist in raising the moral, the educational and professional standard to a higher plane; that the labors of the genius of merit may not be lost and in the future we may look upon them and learn their meaning, the managers of this Institute have resolved that the highest honors possible be given to the works of the master; and that he be rewarded for his labors and loves, they have decreed to award a *Diamond Medal* for the best picture exhibited in their annual meet of 1907 at Winona Lake, Ind. This medal shall be known as "The Diamond Medal of Honor" and bear an inscription of the title of the picture for which it was awarded and the name of the Institute by which it was given; and the picture receiving this honor shall be hung in the salon as a permanent exhibit, its award be inscribed thereon with date and name of maker. It shall be insured, copyrighted and protected, and all glory and honor possible shall be ascribed thereto.

In addition to the Diamond Medal, other awards will be given, among which will be a Certificate of Special Distinction, to be given to all pictures chosen and considered worthy to be hung on the walls of the Institute as a temporary or loan exhibit, thus exemplifying your reward in the effort to lift up the honors of photography, that all may feel and more fully realize and appreciate the good photography has achieved in the moral advancement of civilization, education and commerce.

#### CONDITIONS OF AWARD

No picture shall be passed upon for this honor that is not properly titled. Should the excellence of the picture chosen for this honor be judged not to equal the one chosen as best at our last annual meet, then the Trustees reserve the right to retain the medal.

Publication and use of picture shall be under control of Trustees.

Pictures shall be passed upon by two distinct sets of judges, the one selecting a number of three to five pictures, the other selecting the one. Any false claim made by winner of medal forfeits all honors, and at request of Trustees the same shall be surrendered.

*Honors are open to the World, only Indiana excepted.*

GEO. J. PARROT,  
CHAS. W. NEISWANGER,  
GEORGE GRAHAM HOLLOWAY, } Trustees.

OPTICAL LANTERNS. Paul N. Hasluck. Cassell and Company, New York. 40 cents.

This book of 160 pages contains practically all one needs to know about the construction and management of optical lanterns and the making of lantern-slides. The book is well written in an interesting vein and treats every phase of the subject, special attention being given to dissolving-view apparatus, illuminants, and how to conduct exhibitions. There is an illustration on nearly every page.

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## PHOTOGRAPHIC PROBLEMS WITH SOLUTIONS BY PRACTICAL MEN

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UNDER this heading we insert questions of a practical character relating to photography, preferably the technical side. For each suitable question which we publish, we offer twenty-five cents. We also give two dollars for every answer we print, our selection to be absolutely free of any prejudice. The answers to any problem should be in our hands within ten days after the same shall have appeared. The replies should deal concisely with the points at issue and not exceed three hundred words in length. In this connection we shall use only the initials of correspondents, whose identity will, on no account, be disclosed. Irrelevant or discursive answers will not be considered.

#### QUESTIONS

What is the best studio light, and why? —C. E. A.

How should a portrait-negative be retouched to preserve the likeness and character of the sitter?  
—E. E. P.

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The subscription price of FARMING is \$1.00, and the subscription price of PHOTO-ERA is \$1.50, but if you will subscribe to both at once we will give you a year's subscription to both magazines for \$1.75, and in addition will give you a

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will be paid for a number of weeks, if you are disabled in any way described in the policy. *You can have the magazines and the policy sent to different addresses if you desire.*

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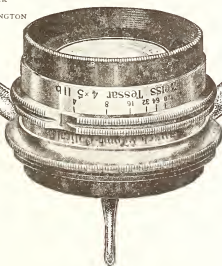
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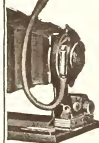
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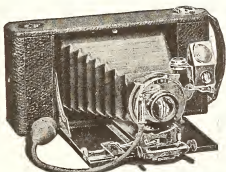


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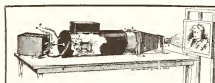
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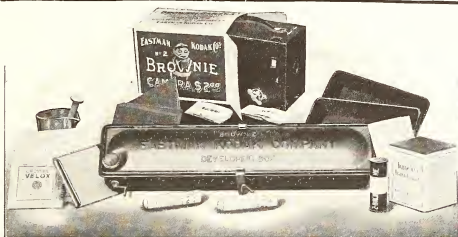
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## EASY PHOTOGRAPHY.

F. Dundas Todd, editor of the "Photo Beacon", in a series of articles in his publication under the above caption, has been endeavoring, among other things, to disabuse the mind of the amateur photographer of certain fallacies regarding exposure and development. Having long ago settled to his own satisfaction the soundness of the theory of the time and temperature method of development, he makes use of the following actual, practical demonstration as a clincher:

"A year ago a boy of fifteen for whom I am responsible used a Brownie Kodak No. 2 during his summer vacation. He made in all about one hundred exposures before one of them was developed. Before I got hold of him he had run about two dozen through the bath with very unsatisfactory results. I pinned him down to the *time and temperature method* and from that time on he *developed all right*.

From September of last year until July of this he never touched a camera. One day he was asked to photograph a group of ladies and he proceeded to borrow my No. 4 Cartridge Kodak, loading it with a roll of six exposures. He had arranged the group on the large front porch and when I came home I was informed of what had occurred. The intention was that I could develop the roll of film, but that evening I was unable to get at the work and so left it to a more convenient season. On returning from the office the following evening I found the boy had developed the roll himself.

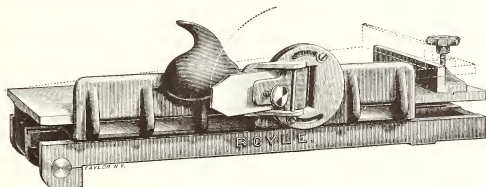
So far there appears to be nothing unusual in what was done, but a statement of the facts is rather interesting. To avoid much measuring and weighing, the boy had been in the habit of using a rodinal developer of a certain strength for a particular time at a fixed

temperature. It so happened, however, that he was short of this developer and on rummaging through my dark-room landed upon a lot of Eastman's developing powders. He immediately dissolved one of them according to instructions, brought the solution to a temperature of 65 degrees and went ahead. About two years before I had told him that the particular pyro formula I was in the habit of using took six minutes to develop and he thought that time ought to be good enough and he acted on the strength of this opinion. The negatives proved to be very good. Being somewhat curious, I asked him what stop he used and he informed me that he really did not know as he had forgotten all about the stop. An examination of the instrument showed the aperture to be F. 16. Then I inquired as to the time. He smiled very blandly and informed me that he took care to give sufficient variety by starting at one second and giving 2, 4, 6, 8 and 10 to the other five. What surprised me was the *remarkable uniformity of the results*. The negative ultimately selected to print from was chosen not for its technical excellence but because it was the one in which the members of the group appeared to look at their best.

The important feature of this experiment I want to impress upon my readers is the fact that *sufficient* exposure was given and that care was given to the *strength* of the developing bath, to its *temperature* and to the *time* the films were permitted to remain in it. These are the three important factors in developing and the boy had had them hammered into his head so frequently that he was very careful over this part of the work even if he had been a trifle careless about the factors that concerned exposure.

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Have you ever stopped to consider how pitifully small the happy-go-lucky man's chances for error are with a pocket Kodak? From start to finish every time he wants to make a mistake, he is brought up with a round turn.

Take off the back of the Kodak to insert the film spool, can't put the back on again upside down or wrong end to—there is the word "Top" stamped on the back, staring him in the face.

Try to put the spool in upside down, "Top" on the spool end again points the way.

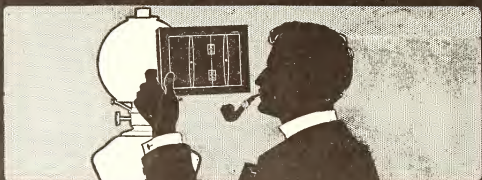
Let him start to wind off the film with the firm determination to run past No. 1—hold on, go slow, a warning hand appears at the little red window and in spite of himself, he turns slowly until No. 1 appears.

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1.50	Overland Monthly	1.25
1.50	Pearson's Magazine	1.50
1.50	Recreation	1.50
1.50	Rain & Storm	1.50
1.25	School and Home Education	1.10

Regular Price 1 Year	CLASS V.	Our Price 1 Year
\$1.50	Broadway Magazine	\$1.40
1.50	Feld and Strum	1.35
1.50	Junior Toilettes	1.35
1.50	Outdoor Life	1.35

Regular Price 1 Year	CLASS VI.	Our Price 1 Year
\$1.80	Ainslee's Magazine	\$1.50
2.00	House Beautiful	1.75
2.50	Lippincott's Magazine	2.50
2.50	National Leader	1.75
2.00	Toilettes	1.65

Regular Price 1 Year	CLASS VII.	Our Price 1 Year
\$3.00	Current Literature	\$3.00
3.00	House and Garden	2.50
3.00	Motor	3.00
2.00	Out West	2.00
2.00	School of Science and Mathematics	1.85

Regular Price 1 Year	CLASS VIII.	Our Price 1 Year
\$3.00	Burr McIntosh Monthly	\$3.00
2.50	Journal of Education	2.25
2.50	School Journal	2.50
2.50	Smart Set	2.50

Regular Price 1 Year	CLASS IX.	Our Price 1 Year
\$2.50	Arena	\$2.50
3.00	Education (new, \$2.50)	2.50
3.00	Electrical Review	2.60
3.00	Fine Arts Journal	2.40

Regular Price 1 Year	CLASS X.	Our Price 1 Year
\$3.00	Eclectic Magazine	\$2.60
3.00	Educational Review	2.65
3.00	Putnam's Monthly	3.00

Regular Price 1 Year	CLASS XII.	Our Price 1 Year
\$4.00	Country Life in America	\$4.00
3.50	L'art de la Mode	3.50

Regular Price 1 Year	CLASS XIV.	Our Price 1 Year
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5.00	Rider and Driver	4.25

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No. in Class	No. of Class	No. in Class	II	A	A	III	IV	IV	V	B	B	VI	VI	VII	VIII	IX	X	XIV
1	II	With	\$2.00	\$2.15	\$2.50	\$2.25	\$2.50	\$3.50	\$2.75	\$2.85	\$4.20	\$3.00	\$4.50	\$3.25	\$3.50	\$4.00	\$4.50	\$5.00
1	A	With	2.15	2.30	2.95	2.40	2.65	3.65	2.90	3.00	4.25	3.15	4.65	3.40	3.65	3.90	4.15	5.15
2	A	With	2.80	2.95	3.60	3.05	3.30	4.30	3.55	3.65	5.00	3.80	5.30	4.05	4.30	4.55	4.80	5.80
2	III	With	2.25	2.40	3.05	2.50	2.75	3.75	3.00	3.10	4.45	3.25	4.75	3.50	3.75	4.00	4.25	4.75
1	IV	With	2.50	2.65	3.30	2.75	3.00	4.00	3.25	3.35	4.70	3.50	5.00	3.75	4.00	4.25	4.50	5.00
2	IV	With	3.50	3.65	4.30	3.75	4.00	5.00	4.25	4.35	5.70	4.50	6.00	4.75	5.00	5.25	5.50	6.00
1	V	With	2.75	2.90	3.55	3.00	3.25	4.25	3.50	3.60	4.95	3.75	5.25	4.00	4.25	4.50	4.75	5.25
1	B	With	2.85	3.00	3.65	3.10	3.35	4.35	3.60	3.70	5.05	3.85	5.35	4.10	4.35	4.60	4.85	5.35
2	B	With	4.20	4.35	5.00	4.45	4.70	5.70	4.95	5.05	6.40	5.20	6.70	5.45	5.70	5.95	6.20	6.70
1	VI	With	3.00	3.15	3.80	3.25	3.50	4.50	3.75	3.85	5.20	4.00	5.50	4.25	4.50	4.75	5.00	5.50
2	VI	With	4.50	4.65	5.30	4.75	5.00	6.00	5.25	5.35	6.70	5.50	7.00	5.75	6.00	6.25	6.50	7.00
1	VII	With	3.25	3.40	4.05	3.50	3.75	4.75	4.00	4.10	5.45	4.25	5.75	4.50	4.75	5.00	5.25	5.75
1	VIII	With	3.50	3.65	4.30	3.75	4.00	5.00	4.25	4.35	5.70	4.50	6.00	4.75	5.00	5.25	5.50	6.00
1	IX	With	3.75	3.90	4.55	4.00	4.25	5.25	4.50	4.60	5.95	4.75	6.25	5.00	5.25	5.50	5.75	6.25
1	X	With	4.00	4.15	4.80	4.25	4.50	5.50	4.75	4.85	6.20	5.00	6.50	5.25	5.50	5.75	6.00	6.50
1	XII	With	4.50	4.65	5.30	4.75	5.00	6.00	5.25	5.35	6.70	5.50	7.00	5.75	6.00	6.25	6.50	7.00
1	XIV	With	5.00	5.15	5.80	5.25	5.50	6.50	5.75	5.85	7.20	6.00	7.50	6.25	6.50	6.75	7.00	7.50

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